Health, Health Care and Social Cohesion

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Introduction

What we know is that the total resources available to finance health care services are not infinite and that health care providers who think that more resources will be available through privatization and that markets will make the system more efficient, fail to understand or accept that a nation’s total resources have limits. Since health care is not a primary source of wealth creation, the financial limits are set by the wealth a region or nation produces and the societal demands on that wealth. (Evans and Stoddart, 1990) Publicly financed systems striving to achieve equity in health services when a nation’s real wealth base is not growing, end up restricting the income growth of many health care providers and have difficulty introducing expensive new technologies. This is why two-tiering the system (private and public financing) allows some providers to gain a greater share of the pie while others will get less. It also changes the equity in the system since some patients will be unable to afford care or will have less than desirable service (Evans et al, 1996).

Excess consumption of a nation’s wealth by health care can divert resources from investing in the "real economy" which is important in primary wealth creation. (Evans and Stoddart, 1990; Evans, 1994) If the "real economy" fails to grow (as seen in the new concepts of the determinants of economic growth), it is difficult to increase expenditures in what is not the primary source of wealth creation for a society. Economic beliefs that do not differentiate between what can be considered as primary wealth creation and secondary wealth creation and the strengths and limits of markets in providing health care can create distorted policies in the health care field and create inequities in the provision of health care.

It is imperative that the health care cost debate be set in the broader historical socio-economic framework and the deep and broad technologic change underway currently. Dahrendorf (1995) has pointed out that the developed countries of the west face a precarious balancing act between the new opportunities created by the present technological revolution and of economic change and the threats posed by these forces on the factors that contribute to sustaining social cohesion and tolerant democratic societies. Other writers support Dahrendorf’s view that major technological and economic changes have the potential to erode equity and the civic qualities of a society and undermine democracy and political liberty, and that major efforts may be needed to prevent this from happening (Hutton, 1995; Kuttner, 1997).

We now understand that transforming technological change affecting all sectors of society has profound effects on how regions create wealth (Lipsey and Bekar, 1994). The
changes in an economy produced by these deep and broad technological changes can lead to economies or wealth of a society diverging or converging (Economist, 1992) from the per capita wealth of other societies. Recent periods of major deep and broad technological change with great effects on the socio-economic character of societies were the Industrial Revolution (the harnessing of fossil fuels as an energy source) and later electricity replacing steam power. The lessons learned from analysis of these changes are that business cycles as measured by changes in gross domestic product do not capture the deeper changes in an economy produced by transforming technological changes. One measure that does capture some aspects of how well an economy is adjusting to major technological change is total factor productivity. In the United States, total factor productivity (an index of the efficiency of all inputs used by the firm rather than just labour productivity) was flat for more than twenty years during the transition from steam to electricity (David, 1991) and this was associated with social changes and a decline in clerical wages. Today we are in an equally powerful technological revolution which can be described as "chips for neurons" with similar effects on the income of people and its institutions.

In Canada, like many other developed countries, total factor productivity has been flat for more than twenty years (Helpman, E. and P. Fortin, 1995; Canada, 1996). In a sense, our primary wealth creating sector has not been growing at a pace to sustain our public and private expenditures in the secondary wealth creating sector (Mustard, 1996). This has been associated with increasing unemployment, increasing income inequality, rising levels of poverty and decreasing ability of the public sector to finance public programs (Canada, 1996). The debate about health care, methods of payment, and how to organize the provision of care are being, in part, driven by the economic forces released by the technological revolution we are in.

The debates about the financing of health care in a changing economy are largely questions of resource availability, resource distribution for providers of care and social equity in the provision of health care that could have far reaching implications for the long term social cohesion of a society. One of the phenomena that can occur when there is increasing public sector debt as a result of governments trying to sustain income equity in a changing economy through transfer payments and publicly financed programs like health care, is that the self-interests of influential groups will argue against increasing taxes (which tend to increase in periods of major economic change with widening gaps in income and increased unemployment, and increased demand on transfer payments) and push for the dismantling of government programs when they stand to gain from the dismantling (Evans et al, 1996; Evans, 1997). When solutions threaten certain ideological self-interest positions, a variety of strategies are used to protect the economic position of the interest groups. This can lead to substantial distortion of information about health care to serve the groups needs.

Publicly financed programs like education and health care are a form of consumer co-operative collectively buying services from providers whereas most social programs involve taxing one group to pay another (transfer payments). When governments are
constraining expenditures, there are more sources of potential conflict with cuts in health care and education because of their universal nature than with cuts in transfer payments.

If a nation or region has considerable power and has elites that wish to promote throughout the world a market-driven society based on individualism with limited social responsibility, it can, as in the case of the United States health card debate, generate sufficient disinformation to try and undermine what other societies based on a more equitable social philosophy such as no financial barriers to access to health care are trying to do. The intensity of the debate during Clinton’s attempt to revamp the health care system in the United States highlighted the conflict between the Canadian approach to health care and that in the United States. The New York Times (1992) had an editorial based on a series of false statements about the Canadian system, largely generated by narrow, ideologically-based policy institutes in Canada based on deeply flawed studies. These attempts to distort what goes on in Canada illustrate the disruptive effects of groups with strong ideological beliefs coupled with a restricted socio-economic perspective on another society’s values.

Some providers of health care like to promote the belief that medicine is the primary determinant of health and well-being. This concept has been a useful device in both publicly financed and privately financed systems to create political climates to help providers capture more resources. This result does not necessarily improve the social cohesion or trust of a society and the health of the population (Evans et al, 1996). The discussion and concerns about social trust or capital in respect to the quality of societies has emerged as a potentially important issue in the health, health care debate (Evans et al, 1996). Social trust or capital has as its focus, the concepts of community, social organization and cohesion. (Fukuyama, 1995; Putnam, 1993; Kawachi et al, 1997; Shleifer, 1996; Wilkinson, 1996). The terms social capital or trust have been used to describe this quality of societies and a number of studies have examined the relationship between social cohesion on a community’s economy, its tolerance, its governance and its health and well-being. This can be defined as the social organization reflected in civic participation, sense of reciprocity and trust in others that facilitates cooperation among citizens for mutual benefit. The characteristics of health and social services in a society, such as how health care is provided (public or private), may influence the social cohesion or trust of a community. A two-tier health care system may weaken a community’s sense of trust (Evans et al, 1996).

The economic framework or beliefs that dominate a society influence the quality of social environments (Putnam, 1993; Hutton, 1995; Kuttner, 1997). Capitalism based on individualism with little concern for the social environment and its effect on the life cycle of individuals will tend to create substantial inequality in income distribution and contribute to erosion of a society’s trust or social cohesion. Within the United States, it is the communities with the greatest income inequality that have the least trust and highest mortality rates (Kawachi et al, 1997). When economies that are going through a major technological change are in trouble, income inequality tends to increase (David, 1991; Newman, 1995; Bronfenbrenner et al, 1996; Kuttner, 1997). Paradoxically, communities with the highest degree of trust are the ones that tend to do well economically and have
better health statistics. It seems likely that societies that know how to use their resources, human and financial, to sustain the quality of their social environments during periods of major socio-economic changes will be the ones that sustain trust and social cohesion.

Since the social environment of a society and the way a society provides health care is influenced by its health and economic beliefs, it is useful to examine these beliefs and their relationship to health care and health and how the beliefs are used by groups in a society.

**Health Beliefs and Health Care**

In Greek society, their health beliefs were expressed by two gods, Aesculapius and Hygeia (Mustard, 1987). If the dominant health belief was that of Aesculapius, the primary health interest of society was in the role of medicine. Today, societies (such as the United States), in which the Aesculapius view dominates will tend to have a strong individualistic philosophy. In contrast, if the belief is in the framework set out by Hygeia, the focus will be how the environments in which we live and work throughout the life course determine the health and well-being of individuals and populations. These societies will, in theory, tend to have a partnership philosophy and higher degree of trust or social capital (Eisler, 1987). Societies in which the belief of Aesculapius dominates will tend to have a more individualistic culture and have as their main health focus, health care and health care policy not health policy. Societies in which the concepts of Hygeia are dominant will tend to focus on the determinants of health and inequalities in health and how policies that affect the economic and social characteristics of society (income equity, provision of social safety nets, etc.) affect the development and health and well-being of individuals and populations. There is a natural tendency to confuse the two health beliefs leading to difficulty in differentiation between policies concerned with health care (health care policy) and those concerned with the determinants of health and the social environment (health policy). The recent report of The National Forum on Health (1997) illustrates this difficulty. Canada is presently caught in a debate about the relative importance of the socio-economic determinants of health (Hygeia) and the role and value of medicine and health care (Aesculapius) in influencing the health of Canadians.

Providing care to individuals in a time of illness is a well entrenched part of the culture of most societies. The expectations of members of a society for health care range from supportive compassionate care in times of need to medical interventions that stabilize problems and, in some circumstances, provide a cure and improve the quality of life for individuals with chronic health problems. The immediacy of the needs of an individual with a disorder affecting his or her health, creates the need for an immediate response. It is only natural that societies create institutions to meet these needs since all members of a society will require health care at some time during their life. This need has led in developed countries to sophisticated systems of health care available in some form to all members of society that are directly or indirectly publicly regulated and substantially publicly financed through a variety of institutional arrangements (Evans,
The level of funding is, in most systems, related to the wealth of a society and is driven by the work of providers of health care.

The providers of care logically argue the importance of their role in improving the health and well-being of sick and injured individuals and continually develop and bring into the provision of care, new and often improved interventions for the diagnosis and treatment of illness or injury. Since health care services throughout the developed world have a large element of public finance, their growth creates increasing demands on the public purse. As a consequence, governments become increasingly concerned about the efficiency and the nature and appropriateness of health care services and providers of care become caught between the forces trying to constrain costs and their professional desire to sustain their incomes and to provide new and more effective care. Thus, the health care policy pressures on government in this sector are immediate, focused on the balance between constraining expenditures and the needs and desires of health professionals providing care to individuals and the expectations of sick individuals. These pressures are relatively constant with political implications, leaving little room or incentive for Ministries of Health to focus on the broader and longer term policies related to the quality of the social environment and its effects on health (health policy).

The economic circumstances and the expectations and beliefs for both providers and consumers of health care, has forced the health belief framework of most developed societies into the Aesculapius mode. Thus most institutions concerned with health (academic, business, and government) are focused on the health care component of health and the needs of individuals who are sick or injured, not on the broader social environment and health issues. It is interesting that the Blair government in the United Kingdom, perhaps to counter the health care pressure, has created a minister with a specific responsibility for the society and health issues and inequalities in health (Tessa Jowell, Minister of State for Public Health, United Kingdom - press release May 1997).

A society that decides to make health care available to all of its citizens through a universal health insurance system, makes provision of health care a potential institutional structure to help sustain social cohesion and trust. These societies may be better able to balance the policy implications for both health care and the determinants of health. Certainly the United Kingdom, Scandinavian countries, and Canada have shown to date stronger initiatives and interest in the social determinants of health than the United States.

The socioeconomic issues, related to social cohesion or trust, that effect the health and well-being of individuals and populations are less visible to individuals, poorly understood, and often blurred by narrow self-interest groups. This subject also comes up against the restricted intellectual framework of medicine and other caring professions and does not have immediate political implications. The belief structures or intellectual framework which determines academic disciplines, influence recognition and rewards and steers the way in which academics and others define and study problems. These factors influence the beliefs and focus of academic institutions, governments, research agencies and the concepts and formation of health policy.
Health Beliefs and the Determinants of Health

Most physicians are intuitively aware of the limits to medicine and the importance of the social environment in which people live and work on the effectiveness of medical interventions and on the health of people. Virchow (1849), a German pathologist in the last century, who spent many years trying to understand the causes of vascular disease and its thrombotic complications, like heart attacks, in his later years came to the conclusion that the key factor influencing the health and well-being of individuals and populations was the socio-economic conditions in which they lived and worked. In this century, McKeown (1976; 1988), a British physician, was also interested in how the socioeconomic changes associated with the Industrial Revolution affected health in the United Kingdom. His detailed analysis of the changes in mortality in the United Kingdom following the Industrial Revolution led him to conclude by exclusion that the reason for increase in life span was the improved nutrition of the population resulting from improvements in agriculture and food distribution associated with the gradually improving standard of living. His conclusion that public health in its traditional form accounted for only 25% of the decrease in mortality rates following the Industrial Revolution and that medicine’s effect was minimal, upset his profession. When he died, the writer of his obituary in the Lancet (1988) stated, "There would be no civil honours for a man as forward looking and as disturbing as this." Interestingly, it was McKeown’s work that was the basis for the famous "Lalonde Report" (1974) from Health Canada in the 1970s. This report set out the reasons for the differences between the health (social environment issues) and the health care agendas and the need for strategies to develop policies for health different from those for health care. For all the reasons that have been discussed, this landmark report was not widely understood and applied in society largely because the health care belief framework (Aesculapius) continued to dominate most sectors of Canadian society.

McKeown’s conclusion about what caused the drop in mortality rates following the Industrial Revolution, within the United Kingdom, troubled not only his profession but others such as Fogel, an economic historian, was also skeptical. Fogel set to work (Fogel, 1991; Fogel, 1994) to examine whether food production and distribution did improve in western countries in association with the Industrial Revolution, and whether this could be related to the improvements in the health of these populations. He found that the records of agricultural production and distribution following the Industrial Revolution confirmed McKeown’s conclusion that the populations in western countries became better nourished leading to improved health. He did this in part by targeting two measures of the adequacy of population nutrition (height and weight) that were available in the records of most of these countries. The height of a population is primarily determined by its genetic characteristics and how well it is nourished during childhood. Thus, changes in the mean height of a population are a measure of how well children are nourished and indirectly the conditions of early childhood. One of the strong associations he found was that as the mean heights of populations in western countries improved with better production and distribution of nutritious food, so did life expectancy. There was also an association between improved average weight of the population and better health. Many adults were under nourished at the time of the Industrial Revolution and were, therefore, only able to
do limited work and were vulnerable to poor health. Fogel also observed that the improvement in the circumstances of children, as estimated by the changes in height, appeared to be related to a lessening of the risk of chronic diseases in adult life. He thus concluded that conditions in early life set the risks for many health problems in adult life. McKeown’s earlier analysis did not let him draw this conclusion. The "Black Report" (Black, 1980) emphasized the importance of early childhood conditions as an important determinant of health. This conclusion, that the conditions of early childhood are a determinant of health in later life, is strongly supported by the results of recent research (Barker, 1992; Hertzman, 1996; Power and Hertzman, 1997).

While the historical evidence shows that health improved with the prosperity associated with economic growth following the Industrial Revolution, it is not clear how important socio-economic conditions are in determining health and well-being in today’s prosperous western countries. Is health care a more important determinant of health today than the improved prosperity and socio-economic conditions following the Industrial Revolution? There is now a substantial body of evidence that the quality of the environment in which individuals live and work throughout the life cycle is still the major determinant of health and well-being (Kaplan, 1997; Marmot, 1995; MacIntyre, 1994; Townsend et al, 1982). Some estimates indicate that in Western countries more than 75% of the inequalities in health are determined by the social and work environments in which individuals live and work (Kaplan, 1997; Marmot, 1996).

Social Environment, Health and Health Care

An historical example of the tensions between the two health beliefs and public policy comes from initiatives in health in the United Kingdom in the second half of this century. During the second World War, many social leaders in the UK wanted to narrow the gap in health status between the upper and lower classes. Lord Beveridge (1942) and his colleagues believed that health care was an important determinant of health and convinced the government that the gradients in health as measured by death across the social classes (lowest mortality in the top social class and highest mortality in the bottom social class) was primarily caused by financial barriers to access to health care.

The debate in the British cabinet during the Second World War also revealed another tension in beliefs that is important in relation to economic and health beliefs. This was focused on the recognition by some in the government that in the fifty years before the war began, the British economy had declined substantially compared to other developed nations (Dahrendorf, 1982; Hutton, 1995; Barnett, 1986). British technological and industrial capability was so weak at the start of the war that it was only through the import and application of American technology early in the war that Britain was able to produce the material necessary to at least hold the Germans. Thus, some in the government recognized that Britain had to rebuild its industrial economy after the war if it was to restore its wealth creating capacity in relation to other countries. These individuals recognized the difficulty of introducing and financing national social programs (secondary wealth creation) if the primary wealth creative capacity of the nation was weak. The debate reflected the chapter in Adam Smith’s book (1776) that
discusses productive and non-productive labour. Smith states that medicine, important as it is, is non-productive labour and a society’s expenditures in this sector are dependent on the productive or primary wealth creating sector. Smith categorizes doctors like a variety of other professional groups, such as opera singers, lawyers, and civil servants as menial servants. This point, which seems as important today as it was in Smith’s time, implies that expenditures on medicine or health bear some relationship to how much a society can afford to spend on what might be called its secondary wealth creating sector. In the British cabinet debate during the second World War, advocates for improving the health of the population by removing the financial barriers to health care, won. Britain, as it has worked to rebuild its economy, has had difficulty sustaining or expanding support for its social programs such as health care.

The story of Britain’s socio-economic problems since World War Two illustrate the effects of socio-economic factors on health and the problem of financing health care when the country’s primary wealth creating capacity is sluggish (Dahrendorf, 1982; Hutton, 1995). This issue is relevant to Canada since Canada has had a sluggish economy since 1975 as reflected in our weak growth in total factor productivity and the associated socio-economic changes, such as unemployment and poor improvement in the incomes of people under 45 (Helpman and Fortin, 1995; Canada, 1997; Statistics Canada, 1997).

The establishment in the United Kingdom of the National Health Service in 1948 with the belief that this would decrease the slope of the gradient in health across social classes, was a test of the role of medicine in reducing the inequalities in health as measured by mortality. This initiative along with the emergence of effective medical treatments for some diseases including infectious diseases, reinforced the belief that medicine now had a major influence on the health of individuals and populations. However, the Merrison Royal Commission on the U.K. (1979) health care system in the 1970’s reported that contrary to the expectations set by the Beveridge report for the national health care service, the gradient in health, as measured by death, across the social classes had actually increased since 1948. The life expectancy of the population improved during this period with the greatest improvement in the upper social classes and the least improvement in the lower social classes.

The release of this report led to an intense debate as to whether the widening gap in health status across social classes was due to poor allocation of resources for health care in relation to need, barriers created by health care professionals and other factors or was caused by the changing socio-economic conditions in the United Kingdom affecting the health and well-being of individuals throughout their life course (Allsop, 1984; Illsley and Baker 1991; MacIntyre, 1997). We do not know whether there were changes in social cohesion or trust during this period, but there is evidence of growing income inequality in British society (Wilkinson, 1993; Hutton 1995).

The Labour government of the time set up a commission chaired by Douglas Black, the Chief Medical Officer in the Department of Health and Social Services, to explore why there was a steepening mortality gradient across social classes despite the fact that there was a national health service (Black, 1980). The commission concluded that the
primary factor causing the growing inequalities in health was socio-economic, due in a large part, to the effects of poor quality social environments on families and children. This report was released when Margaret Thatcher’s Conservative government had taken power. Her government, with its strong commitment to individualistic capitalism, restructuring society and its institutions and cutting back on publicly financed social programs, did not want a debate about social issues and health to hamper their goals. They therefore allowed only 260 copies of "The Black Report" to be printed. It was, however, subsequently published by Penguin Books with the title "Inequalities in Health" (Townsend et al, 1982). Like the earlier Lalonde Report in Canada, nothing substantial was done to implement the recommendations in the "Black Report".

This story illustrates that health and economic beliefs and ideological and political forces can hamper a society’s attempts through government to address the social environment and health issues. The political philosophy based on the theme of individualism with little societal responsibility believes that the best rise to the top and the less able or fortunate slide down the socio-economic scale partly as a result of poorer health as a result of their own behaviour and that little can be done to help them. Least of all, this philosophy holds that finances should not be used to help these individuals since many will tend to become lazy and dependent on welfare. This point of view clashes with the view that societies should try to sustain quality social environments and equity in health and well-being. One of the forces that influences the quality of social environments is how societies create and distribute wealth and the effects on individuals.

Economists still do not adequately understand the determinants of economic growth and the effects on the environments in which people live and work (Economist, 1992; Kreps, 1997; Frank, 1993). There is increasing recognition that standard economic thought does not provide adequate concepts to sustain reasonable opportunities for work and income equality, particularly in times of major economic change. Most of the work of economists does not pick up on Fogel’s (1991, 1994) observation about how the improved quality of the population following the Industrial Revolution had a large effect on economic growth. There is a need to link our economic concepts about how we create wealth with our improved understanding of the factors determining the quality of populations such as changes in the environments in which individuals live and work.

The new Labour government in the United Kingdom has reactivated the Black Report under a committee chaired by Sir Donald Acheson, another former Chief Medical Officer of the Department of Health and Social Services (UK, 1997). This time the United Kingdom government has created a new portfolio to deal with the society and health issues, since it is very difficult to get the Ministry concerned with health care to cope with issues around the complex social determinants of health. This initiative could fail, however, because this new department does not have the structure and resources to integrate our new understanding about the determinants of economic growth, health and human development to create and improve social environment for British society.

The Canadian Health Forum report (National Forum on Health, 1997), like the Black Report (Black, 1980), concluded that one of the factors contributing to the inequalities in
health were the socio-economic changes affecting Canadian society, particularly the
effect on mothers and children. There is growing recognition that conditions of early life
set coping skills, behaviour and health risks in adult life (Mustard and Keating, 1993;
Mustard, 1996). The recent Throne Speech by the Government of Canada (Canada, 1997)
gives a high priority to strategies that could improve support for mothers and children.
The socio-economic changes in the United States, Canada, and the United Kingdom
driven, in part, by a growing culture of economic individualism have been associated
with a decrease in the quality of social environments and the number of children and
families living in adverse circumstances (Picot, 1995; Bronfenbrenner et al, 1996).

Despite the major socio-economic changes affecting societies today, our improved
understanding of economic forces, social change, the human life cycle, and health and
well-being provides competent societies with an opportunity to cope with major
economic social changes better than in the past. A key part of this new understanding is
the increased appreciation of how early childhood circumstances affect ability to learn
behaviour, and health risks throughout the life cycle.

The Life Cycle and Socioeconomic Factors

The circumstances in which children are raised during their early years has a major effect
on their subsequent development (Power and Hertzman, 1997; Brooks-Gunn, 1994;
Young, 1997). A narrow economic focus, with little concern about society, will tend to
undermine the quality of social environments with negative effects on those with little
political clout particularly mothers and children. Because the early childhood period sets
the basic coping skills, behaviour and competence for the life cycle, this lack of concern
has implications in respect to the future quality of a population. We know that societies
that invest in mothers and children tend to have better overall performance in measures of
literacy and mathematical performance (OECD, 1995; Case, 1996). They also appear to
have better health and well-being in adult life (Caldwell, 1986; Mustard, 1996; Hertzman,
1995).

The government of Canada and several provincial governments, recognizing the
importance of the conditions of early childhood and later life events, have issued strong
statements about initiatives to prevent adverse circumstances in early childhood. Many
have created ministries concerned with mothers and children (British Columbia) [1996],
or secretariats concerned with mothers and children and youth (Manitoba [1994], Ontario
[1997], New Brunswick [1994]). One presumes that these governments recognize that
their present government department structure cannot cope with the issues around
children and youth. These developments could mean that Canadians who may have a
stronger base of social cohesion or trust than the United States and the United Kingdom
are taking steps to minimize the adverse effects of our present socio-economic change on
mothers and children. Canada may be moving to implement policies related to
development and the determinants of health that will have a positive effect on the health
and well-being of future generations. To be effective, these policies must mobilize
communities and strengthen the cohesion and trust of our communities. The most
difficult challenge is to increase the understanding of those concerned with economic and
social policy about the determinants of health and human development and economic growth.

**Economics, Health and Well-Being**

The historical evidence as assessed by McKeown (1976, 1988) and Fogel (1994) emphasizes that for reasons that are not yet fully understood, how nations create and distribute wealth affects the structure of society and the health and well-being of the population. Both Das Gupta (1993) and Sen (1993) have argued that measures of the health of populations is a good indicator of an economy and its effect on society. We now know that societies that get into economic difficulties can have negative effects on income distribution and their social environments with adverse effects on the health and well-being of their population (Fogel, 1994; Kaplan, 1997). Throughout the industrialized world, there is a clear split between those who believe the way for the future should be based on greater emphasis on the individual and less concern about people and the social environment and those who want more collective action to sustain the quality of the environment in which we live and work. This difference can be considered as individualistic capitalism versus capitalism in a societal context. (Capitalism in which the private sector has a strong commitment and incentive to invest in its society.)

Economic beliefs, like health beliefs, are important factors influencing how societies cope with socio-economic factors and health and well-being. Despite the historical evidence about the relationship among economies, the social environment, and health, many of today’s theoretical economists tend to ignore these relationships in their work. Indeed, Frank (1993) has argued that the education or training of American economists tends to make them insensitive to the people aspect of society. Back in the time of Adam Smith, the social conditions were part of his socio-economic arguments and theories. However, as economics took steps to become a science and use Newtonian mathematics to develop and "prove" theoretical concepts, the discipline gradually excluded many subjects or issues from its work that were difficult to measure and model (Kreps, 1997). Many of the observations about people, health and well-being and society are difficult if not impossible to include in the theoretical equilibrium mathematical constructs they have developed. Thus, although the more restricted theoretical economic work of today is relevant to concepts such as productivity, labour, capital, inflation and business cycles, it has become largely separated from the world of people and their societies, the quality of populations and major technology innovation and its social effects. Since economics and its theories have had a considerable influence in English speaking western countries on values and public policy, they have tended to tilt the capitalism and ideology of English speaking cultures to what can be described as classical libertarianism.

Solow (1970), working from the neoclassical economic framework characterized the key factors driving the economy today as greed, rationality, and equilibrium. There was no discussion or concern about the environment in which individuals live and work and the factors influencing these conditions and the effects on coping skills, competence and behaviour. In order to do their work and adhere to their mathematical models for evaluating the economy, it has been suggested economists have steered clear of the non
quantitative "saloons of the social science" (Kreps, 1996). By staying away from what many consider the anarchy of sociology, some claim much has been accomplished by pushing ahead with what has been described as the "scientific canonical principles of neoclassical economists" (Kreps, 1996). Thus, there has been little effective communication between neoclassical economists and scholars in health and the other social sciences concerned with human development and health and well-being. One has only to look at the intense debate between Evans (1997) and Rice (1997) and Pauly (1997) and Gaynor and Vogt (1997), over markets and health care to get a sense of this intellectual clash.

Kreps (1997), reviewing the present stage in the evolution of economics, has suggested after discussion with Paul Romer, that the mathematical modeling constraint created by neoclassical economics on what is studied in economics, has greatly narrowed the field of study since Adam Smith’s day. If today’s constrained neoclassical economic framework can broaden out to include measures of technology and economic growth, the social environment and the determinants of human development, health and well-being, this would again place economics in a broader socio-economic framework. Romer, according to Kreps (1997) has likened this potential evolution of economics to an hour glass. The base of study in Adam Smith’s time more than 200 years ago was broad. It then became narrowed with the constraints of Newtonian mathematical modeling and now may move with new analytical approaches to a fuller inclusion of measures of the social environment, human development and health. Until economists can cope more readily with the concepts of the quality of the social environment as measured by social cohesion or trust, and the quality of a population in terms of health and well-being, there will be a sharp conflict between a narrow individualistic form of capitalism versus capitalism within a societal framework.

The potential significance of broadening the intellectual framework of economics in relation to the quality of a population and long term economic growth is brought out by one of the conclusions from Fogel’s (1994) historic analysis - 50% of the economic growth in the United Kingdom following the Industrial Revolution was because of the better quality of the population as a result of their improved health and well-being. With a few exceptions, economics has been unable to embrace both the historical evidence and the present evidence about the determinants of health and well-being in relation to economic and societal change.

Many economists use education as an indicator for the quality of a population. Unfortunately, our new understanding of human development, particularly the development of the brain in early life and its effect on cognition and behaviour in later life, shows that standard measures of education do not capture the full story about the quality of populations (Mustard, 1995). Among the problems is the fact that measures of learning (literacy, mathematical skills) when assessed against socio-economic markers show that these indicators, like measures of health, are a gradient (Willms, 1996). Economic theory does not easily cope with the implication of gradients. Some countries have shallow gradients for measures of health and human development when assessed against socio-economic indicators and a high mean value while others have steep
gradients and a lower mean value (MacIntyre, 1994; OECD, 1995; Case, 1998). These gradients are driven in part by the effects of economic forces on social environments and the conditions of early childhood. A country like the United States, in contrast to Canada, has very steep gradients in measures of literacy and mathematics ability when assessed against socio-economic indicators. Canada’s measures show that while we do not have the shallowest gradients, we are doing better than many other developed countries such as the United States.

There is evidence that some provinces have steeper gradients in literacy than other provinces (Willms, 1997). A measure of how well Canada and other countries are coping with the socio-economic changes can be seen starkly in the changing slopes of these gradients.

Social Capital (Trust), Human Development and Health

How does the environment in which individuals live and work affect their health and well-being and does this show a relationship to the concepts of social capital or trust? Studies on populations in relation to their socio-economic status or places of work shows that health is a gradient when assessed against job hierarchy or place in the social hierarchy. This observation is true for both death and sickness/absence from work (Carstairs and Morris, 1991; Marmot, 1992; Marmot et al, 1994; MacIntyre, 1994). In the case of the Whitehall civil service, these observations are from a middle class educated population who are well fed, housed and served by a publicly financed health care system. These gradients are not primarily due to variation in the conventional life style risks factors (Marmot, 1995). It would appear that these health gradients in the workplace are related to the competence and coping skills of individuals and their job characteristics (Marmot, 1993). As well as the effect of job structure, these gradients in health may, be influenced by competence and coping skills set in early childhood (Mustard, 1996; Hertzman, 1996). There is a growing body of evidence that early life conditions set basic competence and coping skills and many of the risks for the health problems in adult life (mental ill health, blood pressure, accidents, coronary heart disease, strokes) (Barker, 1992; Power and Hertzman, 1997). The development of the brain in the period in which it is most plastic (late in utero to age six) appears to set an individual’s basic competence and coping skills which relate to future developments and many of the risks for chronic health problems in adult life (Power and Hertzman, 1997; Maughan and McCarthy, 1997; Hertzman, 1996).

The revolution in neuroscience has now given us substantial insight into the importance of early childhood. The billions of neurons in the brain have to form trillions of connections to give an individual full competence and coping skills (Huttenlocher, 1984; Perry, 1996). The most crucial period for this is late in utero and during the first six, particularly the first three, years. Children who receive inadequate stimulation (such as touch, sound, vision, smell, taste) during this period will not form the optimum connections among their billions of neurons with poor capability to learn in the school system and antisocial behaviour. We now appreciate the neuroscience basis for why a poor early childhood can lead to difficulties in learning in the school system and coping.
with the challenges of life throughout the life cycle (Mustard, 1996; Hertzman, 1996; Shore, 1997). We now are beginning to understand the biological pathways (neuroendocrinology and neuroimmunology) by which how we cope with the environment in which we live and work throughout the life cycle influences your ability to learn and how it affects health and well-being (Coe, 1993; Mustard, 1996; Perry, 1996; McEwen, 1998). As discussed earlier, how well a society is coping with socio-economic change can be estimated by the gradients in measures of child development in the early life period and the gradients in health and well-being later in life. We know that adult health risks are related not only to early childhood but also to the kind of social interaction and support individuals have in their daily lives (Kaplan, 1997; Cassel, 1976; Berkman, 1985; Seeman, 1987).

One measure that appears to give a reasonable estimate of the quality of the first years of life estimates the cognitive and behavioural characteristics of children when they enter the school system (Doherty, 1997; Fuchs, 1994; Tremblay, 1992). This measurement is often referred to as "readiness to learn". We now appreciate that the measurement can predict performance in mathematics in the school system, behaviour in the school system and juvenile delinquency. It has been observed that quality preschool support for children can greatly reduce later events such as unemployment, crime, and mental health problems (Hertzman, 1996; Tremblay, 1992; Kaplan, 1990; Schweinhart, 1993; Young, 1997). Thus, an important early life measure of how well a society is doing is the "readiness to learn" of its children when they enter the school system. There is now some evidence that this is also a gradient when assessed against socio-economic indicators (Brooks-Gunn, 1994). We do not have good comparative longitudinal Canadian data but many primary school teachers believe that the number of children entering school who cannot cope has increased substantially over the last ten to twenty years. In some schools, they estimate that as many as 30% of the male children cannot cope when they begin school. Since this probably reflects the outcomes of the conditions influencing the preschool period, this may mean it may be an early indication of a deteriorating preschool environment for children.

Many believe that societies with a strong base of social capital or trust will have the smallest negative effect on the conditions for early childhood. However, there has been no direct measure of this. There has, however, been one set of studies looking at the relationship between health and social capital (trust). In the United States, they found that there was a strong correlation between income equality and health (Kennedy, Kawachi and Prothrow-Stith, 1996). They also found a strong correlation between trust and income equality. When they examined mortality rates by state against measures of trust by state, they found a very strong correlation (Kawachi et al, 1997). This evidence is in keeping with the other evidence showing that the quality of the social environment in which people live and work affects their health and well-being. The Roseto study (Egolf et al, 1992) illustrates the effect of community relationships on health and what happens when these relationships are eroded. In developed countries, the countries with greater income equality have lower mortality rates than countries with a high degree of income inequality (Wilkinson, 1992; Lynch, 1997).
Socioeconomic Change, Health and Well-Being

Can today’s societies cope with the pressures from the economic changes being driven by the "chips for neurons" technological revolution in an intensively globalized world? Those that do well will be those that can integrate the knowledge we now have about the determinants of health, human development, and economic growth and adjust their institutional and social frameworks.

The present economic change is affecting all countries and their social structure. All developed countries are going through a very major technological revolution as powerful as the Industrial Revolution, the "chips for neurons" revolution. For instance, changes in Canada show that since about 1975 our productivity as measured by total factor productivity has been flat (Fortin, 1996; Canada, 1997). Around 1975, our unemployment rate starts to climb, wages cease to improve, particularly for individuals under 40 years of age and more individuals became increasingly dependent on government transfer payments to sustain their income and more children are in poor economic circumstances (Canada, 1997; Statistics Canada, 1996; Picot, 1995). There is growing evidence that Canada’s social well-being, like other market societies, has declined since the late 1970’s.

This lack of real economic growth (as measured by total factor productivity), and the increased need for government transfer payments to sustain income has led to an increase in taxes on a wealth base that has not been growing. The bottom half of the population as defined by median income has increasingly become dependent on transfer payments over the last twenty years to sustain their incomes (Statistics Canada, 1996) (about 25% from transfer payments in 1972 to nearly 70% in 1992), while the incomes in constant dollars of the population over 45, in contrast to those under 45 (Canada, 1997), have continued to improve (although slowly). During this period, the relative income for the population under 45 has declined. Youth unemployment has remained high and families with young children, have become increasingly dependent on transfer payments rather than earnings from work to sustain their income (Statistics Canada, 1997). As governments have had to cut back on expenditures, they have had to cut transfer payments which tend to hit hardest those with the least political influence, such as mothers and children. There is some evidence that the economic status of mothers and children has been deteriorating recently (Statistics Canada, 1997; Picot, 1995). A society with a strong base of social capital or trust should be able to cope with these changes better than societies based on chaotic individualism.

Communities that share a common understanding appear to produce leaders that can build networks among the different sectors of their community (social capital, trust) and mobilize community resources to buffer some of the problems. Many community groups believe that government programs must be designed to better support what communities can do and not disrupt the partnerships communities can build. There is no good evidence that governments have been able to effectively create policies and strategies to efficiently mesh with these community initiatives. Governments need to assess whether their support
for individuals or groups in communities build or strengthen social capital and the effects on human development, health and well-being.

We do not know how strong social cohesion or trust is in Canada or in other countries, but it may be strong in particular sub-national regions. Part of this is related to our long history of being a society in which individuals accept a responsibility to help their broader community. These values are under considerable stress at the present moment. However, many of our governments are showing an increasing awareness of the issues, although they have yet to develop programs that are compatible with the role of communities in sustaining social cohesion or trust and take into account our improved understanding of the relationship among the economy, human development, and health and well-being. To bring about effective programs and changes, there will have to be better linkages with communities and regions (partnership not control) and measurement tools that will let communities estimate how well they are doing.

Promotion of more interaction among community groups and regions that have taken action could be a very important initiative. Community groups are potential teachers for each other of how to sustain their social environments. It is possible that a national capability along these lines might develop by interaction among groups such as community foundations, early childhood educators, social entrepreneurs, business leadership and community-based policing. Government programs should be designed to support this interaction. If this interaction could be built using the social entrepreneurship present in communities, using modern techniques of communication, it could have a significant effect on the future health of communities and the quality of populations everywhere. If this can be done, it would help countries cope with a world practicing capitalism to develop a high quality, healthy population by building strong social environments. This way we would have a strong social capital base, good coping skills, and a healthy population. Only time will tell if we will be able to do this.

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