Millennial challenges for medicine and modernity

ABSTRACT – In our polarised modern world, we face enormous challenges that can only be dealt with through a new approach to human co-operation. Globally, the crisis in medicine poses challenges at micro, meso and macro levels which call for profound changes in medical education and in the organisation and accountability of health care services. Our view of medicine must extend beyond the domain of the physician-patient relationship to include wider aspects of medicine and bioethics. This moral perspective demands that the traditional ethical framework, with its focus on the sanctity of life, be expanded to recognise the importance of quality of life and the need for equitable distribution of resources.

In his preface to *The Age of Extremes*[1] Hobsbawm quotes Sir Isaiah Berlin: 'I have lived through most of the twentieth century without, I must add, suffering any personal hardship. I remember it only as the worst century in Western history.' The expression of this view by such a prominent thinker draws serious attention to a world in which a small and shrinking core of people lives complacently in comfort while millions of marginalised people suffer miserably.

Our modern world

Population growth, consumption of resources and ecological degradation

Population growth and its environmental effects are among the major causes of concern at the end of a century in which the world's population has increased from 1.6 billion to almost 6 billion. While population growth in poor countries has been the main focus of concern for industrialised countries, rates of consumption by inhabitants of rich countries now pose risks of equal magnitude. For example, US citizens comprise 5% of the world's population and consume 20% of the world's resources, while Chinese citizens comprise over 20% of the population, but consume only about 10% of resources[2]. Disregard for the impact on nature of both population growth and patterns of unsustainable consumption have led to ecological degradation and planetary overload[3].

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Communicable diseases

Communicable diseases are the leading causes of loss of human life and potential, and most of this burden is carried by poor nations, in particular those in sub-Saharan Africa[4]. While modern medicine has eradicated smallpox and reduced the global burden of polio, malaria, and leprosy, 'new' infectious diseases such as Legionnaire's disease, Hantaan virus, Lyme disease, human immunodeficiency virus and hepatitis C have emerged in both rich and poor countries. At the same time, old pathogens, including *M tuberculosis,* over which we have gained partial control, are becoming either impossible or very expensive to treat because of multi-drug resistance[4]. The threat of communicable diseases is compounded by the fact that people in poorer countries have limited access to even essential drugs, and also by the increase in population movements (leisure travel from rich to poor countries and migration or displacement of millions of people from poor countries).

Distribution of wealth

Over the past 500 years economic patterns have evolved from mercantilism through *laissez-faire* capitalism and socialism to welfare-statism, and we have more recently experienced a move towards the globalisation of the economy. The thrust of capitalism as an economic system emphasising free trade has been, and remains, a powerful force[5]. The balance provided by socialist perspectives has helped to ensure equitable access to health care and welfare in most European and British Commonwealth countries. The New Deal in the US has been a less effective social equaliser, perhaps because the commitment to human rights is limited to civil and political rights within a highly individualistic form of liberalism which has pitted citizens against one another in competition for access to health care and social welfare.

During the second half of the 20th century, the evolution towards a world economy has continued to enrich some nations, and some people within each nation, at the expense of others. The gap between the richest 20% and the poorest 20% of the world's population doubled between 1960 and 1990. This divergence is a measure of the superior performance of the capitalist world and an indication of its exploitative powers. Yet whilst capitalism has greatly improved material conditions overall, not all have benefited, as wealth and misery have been generated simultaneously[6]. The relationship between poverty and poor health is now well-documented[7,8]. The current state of developing world debt ($2.2 trillion) and the continuing and, indeed, escalating flow of resources from poor to rich

nations is impeding development and creating an instability which threatens all nations[9].

The combined assets of the top 300 firms in the world constitute roughly 25% of the world's productive assets. Their formidable economic power and transnational mobility increasingly undermines the ability of national governments to provide the legal, monetary or protective functions necessary for a healthy national economy. The trillion-dollar-a-day market in foreign exchange values any nation's currency at the pleasure of the 'market'. Less than 10% of the trillions of dollars transacted across financial networks are for trade in goods and services. Of the 5.6 billion people in the world, about 3.6 billion have no cash or credit with which to make purchases, and more and more people are clamouring to get into the global labour pool.

The spread of export agriculture and industry in developing countries has uprooted hundreds of millions of people from their land. They are drawn to cities but with only marginal prospects of employment. Centuries-old ways of life, family traditions, child rearing practices, local community structures and bonds are disappearing. Both socialism and liberalism are collapsing and these countries are experiencing a transition towards a post-national order[6].

One adverse effect of these trends is the creation of 'underclasses' in many industrialised countries through neo-liberal policies which reject welfarism. These policies mark the transition from a world of nation states to a world of international capital and supranational organisations. Policies that dismantle social reforms and supersede national economies are the triumph of capitalism, but also accelerate its negative consequences – the degradation of the environment, increasing working class poverty, growing political autocracy, and reduction of political legitimacy[6]. Vaclav Havel has described these processes as a 'thin veneer of civilisation' sweeping across the world[10]. Ironically, we now face the possibility that the 'road to serfdom', which Hayek feared would ensue from political totalitarianism, could now result from economic totalitarianism[6].

Militarisation and its effects

The vast expenditure on weapons and the adverse impact on health of the arms trade has been well documented[11–14]. In recent years, civil wars have accounted for a great number of casualties, predominantly among civilians. Millions of women have been raped and millions of people turned into homeless and stateless refugees. In 1994, 30 million children died worldwide as a result of war and poverty.

At the end of the 20th century hundreds of millions of people are facing slow death because of destitution, disease, forced migration, political and cultural repression and other denials of life-sustenance. The world is in the grip of an economic crisis: no political or economic system has been able to extricate itself completely from it. Struggles for survival, justice, dignity and cultural autonomy are fragmented, localised and largely ineffective. No single all-embracing ideal of rationality, tolerance, science or progress prevails and scholarly research has singularly failed to produce usable wisdom[14].

World views

The technological and economic thrust of the Western world view and the advances it has generated have led many to believe that this is the most desirable way of life. Few recognise that this attitude obscures the many common values that pervade all world views, and masks the benefits which could flow from valuing diversity while seeking universality. Through understanding our own view of the world, we can acquire empathy for the local worlds of others and develop a dialogue that could lead to a greater degree of universalism. The time is now riper than ever for Westerners to strive to understand their own world view, to learn what it means to be human outside their own privileged environments, to appreciate the fragility of their own dignity in a world in which so many are deprived of the basic needs, and to participate in broader visions of sustainable progress.

Rise of fundamentalisms

Martin Marty views the rise of fundamentalisms as reactionary responses to modernity[15]. It is only by seeing the world as comprising many world views, each one attempting to dominate all others, that we can achieve a broader understanding of the rise of fundamentalisms – not only in countries such as Iran, but also in Western nations, for example within Christianity and Judaism.

Marty describes several features that all fundamentalisms have in common: origins in conservative cultures responding to perceived threats from modernity and to increasing secularisation within their own ranks; a return to the real or perceived foundations of their world view; philosophies of history dealing with beginnings and ends, for example 'creationism' and 'apocalypticism'; and the election of leaders to become agents of the divine[15].

Evolution of Western thought

The Western conception of the world and of ourselves has been changing over the past 2,000 years. The transition from the pre-modern era to modernity and the challenges now posed by 'ultra-modernity' show that neither our culture, nor how we perceive ourselves, is static[16].

In the first millennium of the common era, following the collapse of the democratic and scholarly example of ancient Greece, the structure of society was essentially feudal, communal and regionally based. Personal identity was intimately linked to religion, faith, tradition and a hierarchical form of communal life embedded in, and dependent on, nature. Political life rested on state-oriented traditions (such as monarchies), and the church and state were all powerful.

Power and force dominated the relationships between nation states. Cultural policies against minorities were characterised by denial, segregation and patriarchal attitudes. Discourse reflected the powerful influence of belief in revelation, providence and authority. Medicine was primitive but generally holistic in its approach.

With the transition towards modernity, the West's way of thinking changed profoundly. Social structures, while still manifesting religious influences and class distinctions, were increasingly shaped by secular individualism based on scholarship, reason and the concept of civic society within nation states. The concept of the 'self' became more individualistic. Indeed, individualism flourished but created a society of strangers in which civic involvement was gradually eroded. Political life shifted towards democracy and greater personal freedom. The language of discourse focused on progress through political ideology, with diminishing reference to the spiritual aspects of life. Cultural policies towards minorities became less rigidly separatist and assimilation was accepted – although still within paternalistic and imperialistic frameworks. Power shifted from the authoritarianism of individuals to the hegemony of states and corporations. Pluralism, sustained through order and international law, was increasingly advocated as the basis for interaction between states. Scientific advances fostered wondrous progress in medicine and technology, changing the face of death and human suffering, but also generated opportunities for the exploitation and domination of nature. Medicine became increasingly specialised.

Challenges for modernity: a new approach to human co-operation

As we approach the end of the second millennium, we are in the throes of another slow, but definite, shift in attitude, with implications as profound as the shift toward Christianity 2,000 years ago, and the subsequent shift towards science during the Age of Reason. Social structures have become pluralistic in a world that is shrinking as a result of advances in communication and travel. The freedom of individuals is being eroded by the concentration of power in economic organisations that are not accountable or amenable to change through democratic processes. The dominating power of some nations over others is also being transformed by the concentration of power in such organisations as the International Monetary Fund and the World Bank – structures with economic and political force across the globe that override the influence of nations over their own citizens[17]. In the realm of science, progress in molecular biology and genetic engineering is making it possible to re-invent nature through eugenics and the creation of transgenic animals.

Several responses are becoming apparent as we develop deeper understandings of history through an integrated approach embracing a wide range of interacting geographic, social and political forces. A revolt against hegemonic views of 'universalism' is gradually reshaping personal identity through greater respect both for equality and for the diversity between people. Our concept of the 'self' is extending beyond that of the 'self-interested, isolated individual inhabiting a world of strangers' to include the idea of the 'embedded self, arising from and contributing towards community'[18], while electronic communication is creating the concept of the 'virtual self', in which simulation provides a new freedom that can influence identity[19]. Political discourse is being influenced by communitarian challenges to the failings of narrow concepts of liberalism, and a growing appreciation of interdependence at a global level[20]. Integration, celebration of difference, affirmative action and a greater sense of justice and solidarity are replacing discriminatory policies against minorities, at least in some nations. Ethnographic approaches and empathy for the world views of others are shaping a dialogue that could replace authoritarianism.

Virtually all liberal democracies are either multinational, polyethnic or both[21]. In all liberal democracies one of the major mechanisms for accommodating cultural difference is the protection of the civil and political rights of individuals. It is impossible to overestimate the importance of freedom of association, religion, speech, mobility and political organisation for protecting group differences. These rights enable individuals to form and maintain the various groups and associations that constitute civil society, to adapt these groups to changing circumstances and to promote their views and interests to the wider population. The protection of these common rights is sufficient for many of the legitimate forms of diversity in society. However, it has been suggested that some forms of cultural difference can only be accommodated through special legal or constitutional measures above and beyond the common rights of citizenship. Kymlicka divides these into three categories: self-government rights (federal systems like the Canadian), polyethnic rights (eg providing public funding for cultural practices), and special representation rights (eg for women, gays, and other marginalised groups)[21]. The challenge of multiculturalism, which is more acute in South Africa than elsewhere, is to encompass national and ethnic differences in a stable and morally defensible way[21].

Ecological considerations, the ethics of international relations and the efforts of peace movements are slowly achieving higher profiles. Medicine is also moving beyond individual specialisation to include a multidisciplinary set of activities involving a growing spectrum of disciplines. A stronger primary care basis reflects an understanding of the social basis of disease and health, and that medical practices and health care systems are social constructs.

At the end of the 20th century there are, for the first time, opportunities for new kinds of research across diverse disciplines and societies. Anthropologists, philosophers and natural scientists need not inhabit separate worlds; their texts are more profitably examined when each understands what the other is doing. The extent of 'social suffering' in the world calls for a linking of social policy with health

policy, and social theory with health and public health science. Such efforts must seek to locate pragmatic programmes and policies in a historical context that takes account of the complexity of the human condition. This will require a tolerance for interdisciplinary study, and an advocacy of its intellectual possibilities[14,22].

Challenges for medicine

Societies throughout the world are facing crises in health care precipitated by: (i) the increasing domination of science and technology; (ii) the costs of delivering modern medical care with growing focus on profits, economic utility and management principles; (iii) the inevitability of rationing and whether this should be implicit or explicit in the process of balancing the good of individuals against the common good; (iv) the challenge of health care provision as a right (rather than a privilege) associated with a sense of entitlement that undermines personal responsibility; and (v) a crisis of confidence in the medical profession revealed in a growing alternative medicine industry and anti-science views. The reasons for the crisis in medicine are complex, intimately related to the problems of modernity and include the effects of dehumanisation of clinical practice, and fraud in practice and research[23].

At the *micro* level the most obvious challenge for medicine is to continue making scientific and technological advances, because while science and technology are at the heart of the crises facing medicine they could also be at the heart of the solution. There is also a need to ensure that, in a technological age, clinical skills can be retained, that professional attitudes can be sustained and improved, and that clinical decisions involve access to and use of the best available evidence and the wise judgement that can come from experience[24].

At the *meso* level, medicine is challenged to operate effectively within frameworks that offer universal access to a reasonable level of health care as a basic human right. Health care systems and their financing mechanisms need to be reformed within the conflicting requirements of equity (justice) and utility, and a balance achieved between individual health and population health through optimal inter-sectoral collaboration and social responsibility for health and welfare[25].

At the *macro* level, contributions to world health could be made by holding nations accountable (for health care provision to their citizens) to international bodies, as, for example, envisaged by the WHO in their forthcoming 1998 global Charter[26]. Medicine, as a profession concerned with science, art and humanities, could in this way serve as a model for achieving global interdependence. However, this will also require recognition of the limitations of medicine, and the expectations by doctors and patients of what medicine can legitimately offer will need to change. Greater responsibility for personal health will need to be coupled with an acceptance of the limits of life and much more restricted use of complex technology to sustain life beyond mere biological existence. This new perspective on health care will go beyond concerns of disease and death to embrace greater concern for health, suffering and dignity. This will entail moving from the idea of health care as a merely professional or market phenomenon to the concept of health care systems as equitable social constructs.

Changes in medical education

There are several imperatives for making changes to medical education: (i) the intellectual challenges of the new biology and of developing ways of critical thinking coupled with an understanding of concepts in preference to focusing on factual knowledge; (ii) the challenges posed by organisational, economic and operational influences on the delivery of health care; and (iii) the national and international social and humanitarian aspects of health – for example, the role of physicians in improving population health, in protecting human rights and contributing to peace movements.

Transition in medical education will involve embracing shifts: (i) from the balkanisation of disciplines to integrated learning; (ii) from the biomedical model focused on disease to the bio-psychosocial model emphasising understanding of illness and suffering; (iii) from an overemphasis on reductionist cures towards comprehensive care; (iv) from reliance on experience alone to the inclusion of the best available evidence; (v) from etiquette and codes to ethical analysis and improved communication skills as the basis for physician-patient relationships; and (vi) from considerations of individual health to concern in addition for population health and the common good[27,28]. These shifts are advocated to broaden and complement the successes achieved through the previous approaches.

Domains of morality: the widening spectrum of bioethics

At the *micro* level of bioethics, basic human needs can be identified as respect for human dignity, self-determination and access to the resources required to sustain the physical and mental health of individuals conceived of as rational and autonomous[29]. In this context the physician should be viewed as committed to the care of each individual patient within various models of the physician-patient relationship, embracing the concepts of contract, respect for autonomy, covenant and trust in beneficence.

At the *meso* level of ethical considerations, human needs extend towards such considerations as order and justice within the communities in which individuals are socially embedded and constructed. The responsibility of doctors here is viewed more broadly and includes some concern for public health and the common good through participation in the health care system of their country. Considerations of justice necessarily influence the physician-patient relationship, as do the social contract and utilitarian considerations. Morality should acquire an institutional component through considerations of public health and the management of

resources within a political philosophy of welfare liberalism. Interpersonal relationships should encompass the concept of civic citizenship, with primary responsibilities complementing the primary rights of individuals and the correlative duties of others to achieve these in practice[30].

At the *macro* level, human need extends even further to encompass ecological safety, security and interdependence with nature and other humans. The desired conception of the individual becomes that of an autonomous individual sharing equal rights with all other citizens in the world, in a relationship of interdependence in which the rights of some should not be acquired at the expense of the rights of even distant others. The level of complexity here is much greater because foreign policies of some countries may covertly enhance the lives of their own citizens through exploitation of unseen persons elsewhere. The role of the physician needs to be broadened to include a commitment to world-wide professional ideals, to the continuing advancement of knowledge, and to concern for global health and future generations. The moral perspective thus ranges from interpersonal morality to civic morality, and to an ethics of international relations, linked to political, military, cultural and economic issues[31].

When some ask why we should bother to go beyond the micro level of ethics, we can reply that modern communication, transport, methods of money exchange and the creation of nuclear and other weapons of mass destruction have shrunk distances and differences in many senses, and created common risks. We are all implicated in the lives of others, and it is increasingly impossible to hide with credibility behind the barrier of physical distance. Altruism aside, the importance of physical and moral interdependence is so great that self-interest alone is sufficient to drive policies towards sustainable development. Without this the prospects for humanity seem bleak[32].

Some conclusions and recommendations

Despite so many challenges we do have some grounds for optimism. At its best, the changing world order can be seen as a series of slow but definite shifts: from an anthropocentric to an ecocentric world view, from defensive nationalism to co-operative internationalism; from extreme individualism to a concept of individuals as part of a community and contributors to it; from the desire to accumulate knowledge to a perspective that seeks wisdom in the application of knowledge; from ideological hegemony to richer multicultural conceptions of life that value diversity without embracing a moral relativism that undermines universalism; from the idea that power and force are the only ways to maintain order to an understanding that negotiation and co-operation can free up resources to narrow the gaps between the core and the periphery that threaten peace between societies in an increasingly interdependent world. In the world of medicine and health care, we will see our interests and moral outlook expand from the reductionist basis of disease to include interest in the influences of family, community, national policies and global forces on health and human suffering.

The principles of a world ethic would include a commitment to a culture of non-violence and respect for life, solidarity and a just economic order, tolerance of others, a life of truthfulness, and equal rights and partnership between men and women[33]. Is it Utopian to believe that a loyalty to humanity could one day prevail in the world? We may take heart from the many people who work for and make some progress towards peace. Optimism about the future for a deeply complex, turbulent world rests on humankind's capacity for ingenuity and rational and moral thinking[34].

Acknowledgements

This lecture was given in the 75th year after the discovery of insulin was announced to the world and made widely available by Lilly, and, unknown to the College or Lilly, on the 40th anniversary of my discharge from hospital dependent on this product. I should like to acknowledge with gratitude the inspiration and support I have enjoyed from my wife Evelyn over the past 32 years.

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