

Tackling Health Inequalities: Is it Time for a Paradigm Shift from Health Care Economics to Health Economics?

“We have to invent wisdom for a new age. And in the meantime we must, if we are to be any good, appear unorthodox, troublesome, dangerous, disobedient to them that begat us.”

John Maynard Keynes, 1931, cited in Mannion & Small, 1999.

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Dr Rhiannon Tudor Edwards
Senior Research Fellow in Health Economics
Institute of Medical and Social Care Research
University of Wales, Bangor

Abstract

As an applied subdiscipline of economics, health economics has flourished, defining itself as the study of how scarce health care resources may be used to meet our needs. This evolutionary pathway has led to health economists adopting a very ‘medical’ model of health, in which the predominant production function for health is health care. This paper sets out policy challenges to health economics which have arisen in light of growing recognition by governments of the socioeconomic determinants of health and their stated commitment to tackle inequalities in health. It reviews the concept of a paradigm shift in the natural sciences and its relevance to health economics as an evolving subdiscipline. The paper brings together recent visions of the future of health economics put forward by Williams (1993), Phelps (1995) and Maynard & Kanavos (2000) – visions that are almost exclusively focused on the production, organisation and distribution of health care. In contrast to these visions, this paper argues that health economics will need to evolve to embrace a more socioeconomic model of health and, to this end, offers an expansion of Williams’s diagrammatic representation of the subdiscipline for debate. It concludes by asking whether the magnitude and the magnetism of health care policy issues will continue to prove too strong to allow health economists, should they wish, to steer their research and educational programmes more directly towards ‘health’ rather than ‘health care’ as the relevant social want.

Introduction

When introduced to our parent discipline of economics, students are taught that economics is about how societies meet their wants from limited resources; and that all societies face three fundamental questions: (1) what to produce; (2) how to produce what is to be produced; and (3) how to distribute what is to be produced between individual citizens (Lipsey & Harbury, 1992). The two concepts underpinning such an introduction to economics are, therefore, scarcity and opportunity cost.

Students of health economics are taught that health care is an intermediate good that has no intrinsic value in itself, but has value in its contribution (along with other inputs such as environmental and social factors) towards the production of

health itself, which in turn enables or satisfies other functions such as work, leisure or fulfilment (Chisholm & Stewart, 1998). They are taught that demand for health care, therefore, is a derived demand for health and health's contribution to fulfilment in life. Even though this is what is taught, in practice, the relevant social want at the centre of health economics, it may be argued, has been 'health care', rather than 'health' (Edwards & Boland, 1996).

With some degree of circularity, the introductory textbook of economics which is referred to above (Lipsey & Harbury) asserts that "economics is what economists do...and that what economists do is to study questions that can be handled with their own expertise" (1992: 4). Logically then, health economics is what health economists do, and that our research agenda and the problems we tackle are defined by the methodology and techniques available to us. Some have argued that health economics is failing in its descriptive and predictive powers (Mannion & Small, 1999). Many of us working in the field straddle an ever-widening chasm between the welfare economics upon which we were nurtured (Ng, 1990) and the claims made upon us by policy-makers. With a growing governmental recognition of the socioeconomic determinants of health, commitment to address and reduce inequalities in health and European legislation demanding health impact assessment of policies, programmes and projects which affect health, it may be that health economics as we know it (i.e. the economics of health care) may not be enough. To date, what health economists "do" has been limited by a very medical model of health, allied, perhaps in a search for scientific respectability, to the positivist, modernist natural sciences. Mannion & Small (1999) have argued that if one wants to scrutinise the contemporary practice of health economics, then one has not only to look at the techniques used but also at the implicit assumptions that govern these techniques. It is to this end that this paper addresses the relevant social want at the centre of our subdiscipline.

This paper, written by a rather baffled, jobbing health economist, is an attempt to address the question as to whether there are compelling policy reasons for acknowledging the need for a paradigm shift in the subdiscipline and in our future direction of research and educational programmes. The argument made here may be arrived at from two directions: either viewing health economics as a reactive

social science responding to public policy needs for evidence; or viewing health economics and its altruistic, normative possibilities as a proactive, self-driven subdiscipline.

This paper:

- 1) Briefly traces the development of health economics in a US and UK context
- 2) Considers what is meant by a paradigm shift in the natural sciences
- 3) Reviews some policy calls for a paradigm shift in health economics
- 4) Reviews the visions of health economics as an evolving subdiscipline presented by Williams (1993), Phelps (1995), and Maynard & Kanavos (2000)
- 5) Proposes a paradigm shift through a blueprint expansion of Williams's diagrammatic representation of health economics (1987) to stimulate debate within the health economics community.

The proposal for a paradigm shift and the expanded schematic representation of health economics is based on the following normative premises:

- 1) That society's relevant maximand is health
- 2) That more health is better than less health
- 3) That a more equal distribution of lifetime health experience is an ethical societal goal
- 4) That health economists have the potential to not only inform health care policy but also wider public policy that affects health.

The Evolution of Health Care Economics

The forefathers of modern economics, Adam Smith, David Ricardo and Karl Marx were all concerned with bettering the human lot through the application of scientific endeavour (Backhouse, 1985). Their economics was intrinsically philosophical, political and moral, as well as involving the application of technical methods of analysis. It was value-driven.

From Alfred Marshall onwards, economics aligned itself with the developing natural sciences and its search for absolute principles. Adoption of mathematical techniques led to the philosophical, political and moral aspects of economics declining in significance. Economics therefore developed within the prevailing modernist paradigm based on the assumption that the continuing application of reason would expand knowledge, and that through this expanded knowledge would come the ability to exercise control or intervene in the pursuit of progress (Mannion & Small, 1999).

Health Care Economics in the US

Charles Phelps (1995) traces the origins of health economics to a seminal paper by Kenneth Arrow (1963) who emphasised the unique characteristics of the health care process, and hence, the importance of the institutions that arise in markets for health care, covering public and private provision, insurance, professional-agency status amongst health care providers, and the importance of uncertainty in decision making and in the provision and receipt of health care. Phelps comments that early work in the field was focused predominantly on empirical analysis of the supply and demand for health care and the resultant behaviour of markets for health care. This proposition was recently borne out in a survey which showed that 73% of all papers published in the leading journals of health economics between 1982 and 1999 in the sphere of the supply of health care were generated by US health economists (Maynard and Kanavos, 2000). Acknowledgement that the relevant social want was 'health' came with Grossman's model of the demand for health care (Grossman, 1972). Phelps built on the work of Grossman in his analysis of the role of uncertainty in the demand for health care insurance (Phelps, 1973 cited in Phelps, 1995). This work was followed within the US context by analysis of the phenomenon of supplier-induced demand and Phelps warned that if demand can be influenced by supply-side effect, the usual tools of welfare economics will offer little to policy-makers (Phelps, 1995).

Health Care Economics in the UK

In his diagrammatic representation of health economics, Alan Williams (1987) set out a research agenda to encompass the disparate activities of those of us who have found ourselves "doing what health economists do". This diagram

(reproduced in figure 1) has recently been revisited by Maynard & Kanavos (2000) in their survey of activity in health economics to date. Central to this diagram are boxes C and D, labelled 'Demand for Health Care' and 'Supply of Health Care', symbolising the economist's focus on the market and the health economist's focus on the market for health care. Feeding into box C are boxes A and B, labelled 'What Influences Health? (Other Than Health Care)' and 'What is Health, What is its Value?' respectively. Box E covers the range of micro-economic techniques available for the evaluation of health care interventions. Williams comments that this has been the area in which the bulk of work by British health economists has been concentrated, involving collaboration with clinicians. Box F brings supply and demand together in the analysis of how and whether markets for health care can work and of non-price rationing alternatives. Box G covers evaluation at whole system level – a bird's-eye view of the allocative efficiency and equity of health care systems. Finally, box H covers the planning, budgeting and monitoring mechanisms of health services.

In describing health economics as a subdiscipline, Williams proposed that normative health economics is about ensuring that benefits gained outweigh benefits forgone. He argues that the benefit to be gained from health care is better health. However, this paper questions the weighty attention health economists have paid to health care as a contributor to the production of health in society, in comparison to the attention given to the economics of the many social and environmental determinants of health and to the evaluation of the efficiency and equity implications of policies to reduce inequalities in health. It takes forward the proposition by Alan Williams that "...so far we have hardly begun to use the discipline of health economics for the improvement of the people's health" (1987: 11).

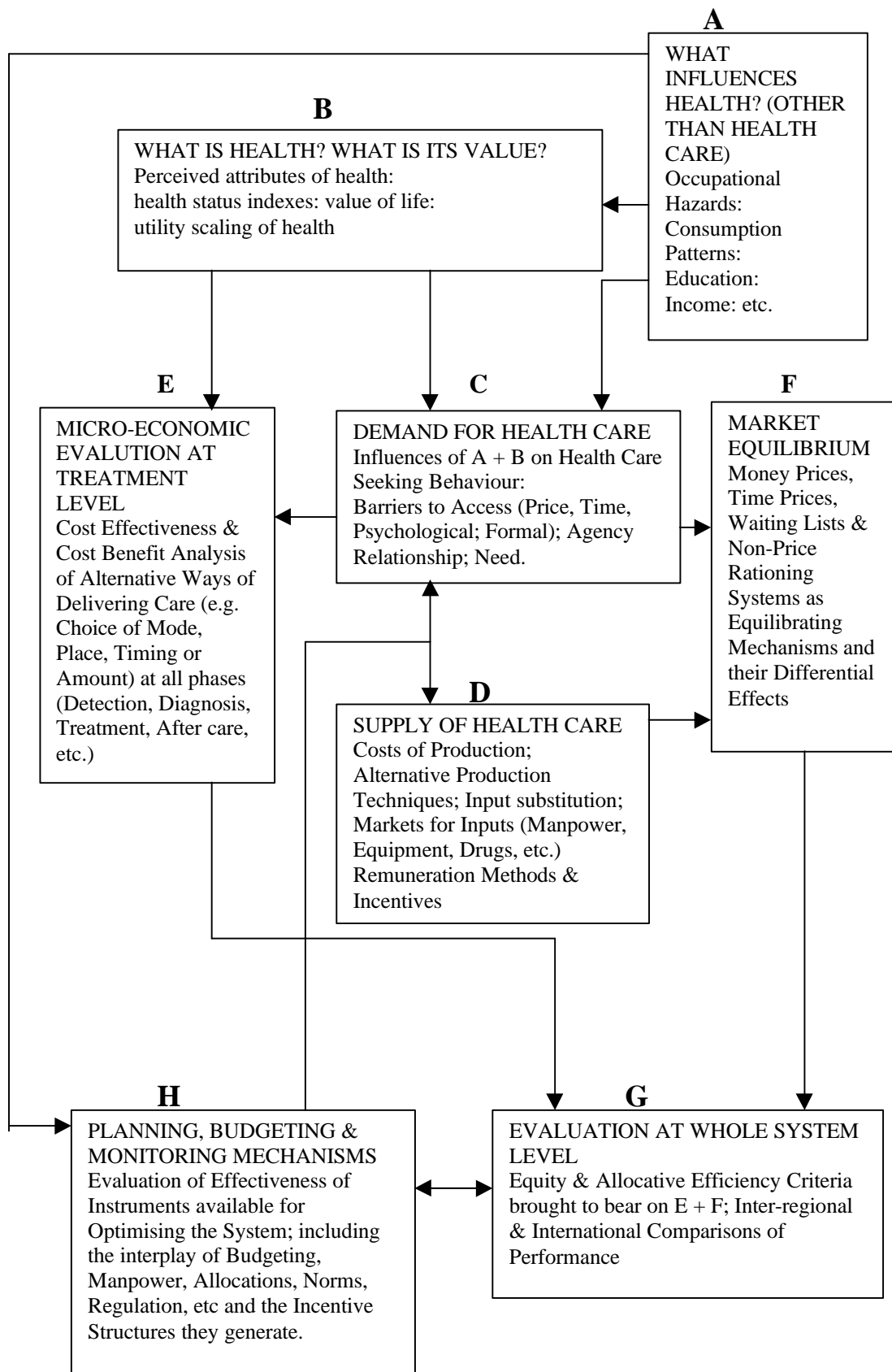


Figure 1: Schematic presentation of the main elements in health economics

(Source: Williams, 1987, p3.)

Maynard and Kanavos (2000) have constructed a taxonomy of articles based on Williams's diagrammatic categorisation. In their review of articles published in the journals *Health Economics* (1992-1999) and *Journal of Health Economics* (1982-1999), they found that academic activity focusing on the supply for health care (box D) represented a proportional majority in terms of cumulative publications (21%). 15% of activity focused on micro-economic evaluation at treatment level (box E), 13% on the demand for health care (box C), 12% on planning, budgeting and monitoring mechanisms (box H), 11% on the question of what influences health other than health care (box A), 10% on evaluation at whole system level (box G) and 8% apiece on the question of the definition of health and its value (box B) and market equilibrium, (box F). The reviewers added an additional overview category, which accounted for 2% of cumulative published papers over the period surveyed.

Boxes A and G, 'What Influences Health Other than Health Care' and 'Evaluation at Whole System Level', which are of central concern to the arguments of this paper, have proved relatively unexplored territory with the exception of a few landmark works which may provide a signpost to a paradigm shift in health economics (Evans et al., 1994; van Doorslaer et al., 1997). Finally, the Williams schematic presentation of health economics does not explicitly offer a box to cover the macro-economic evaluation of the economics of non-health sector policies that influence health.

Paradigm Shifts

Of the many theories of scientific advance, those of Thomas Kuhn (1970) and his idea of paradigm shift offers a means of understanding current policy challenges faced by health economics. We are all familiar with stories of historical scientific revolution – Darwin's theory of evolution, Newton's theory of gravity, Einstein's theory of relativity, and Watson and Crick's discovery of the double helix. Each of these names is associated with, over time, the relinquishment by the majority of the scientific community of old theories and doctrines, the search for new ones, and the adoption by working scientists of these new theories and doctrines.

Kuhn, in his account of the growth of scientific knowledge, distinguished between periods of ‘normal science’, in which a scientific community accepts and adheres to a body of past scientific achievements which form the foundation for further practice, and periods of ‘revolutionary science’ in which crises lead to new paradigms replacing old ones (Backhouse, 1985). During periods of ‘normal science’ Kuhn argues that there is, to a large extent, a cessation of critical debate amongst the scientific community. This period, when accepted foundation theories and axioms are unquestioned by the majority, allows for its application to many problems – problems themselves defined by the prevailing scientific paradigm. During periods of ‘normal science’ students are taught how to view and solve problems using the prevailing paradigm, and professional competence in the scientific field is judged by the ability to use the tools of the paradigm.

Kuhn divides ‘normal science’ into three activities: (1) establishing facts; (2) applying the paradigm to new areas; and (3) reformulating ideas of the existing paradigm i.e. attempts to explain empirical anomalies are carried out. Kuhn argues that ‘normal science’ shapes a scientific community through the acceptance of a particular set of theories, axioms and boundaries, and that this leads to a more rigid delineation of a field of research, in which those who do not accept basic assumptions are ostracised from the scientific community (Backhouse, 1985).

The discovery of empirical anomalies (facts that cannot be explained in terms of the prevailing paradigm) initiate crises and challenge the very foundation of a scientific paradigm. Such crises can arise from the external practical demands for information and explanations or forecasts by the public or policy-makers. Where the scientific community cannot, within their current paradigm, address or meet these demands, the paradigm will eventually be challenged from within.

This paper argues that the paradigm within which we as health economists have largely operated has been defined by a neo-classical, welfarist world in which we have struggled and continue to struggle to fit the anomalies of the market for health care. The following section sets out policy demands which may require the subdiscipline to shift its paradigm to place ‘health’ rather than ‘health care’ firmly at its centre as the relevant social want, and to expand our research agenda to

include macro-economic evaluation of policies aimed to address the socioeconomic determinants of inequalities in health, and policies which affect indirectly (positively or adversely) the health of society.

Policy Stimuli for a Paradigm Shift

The Acheson Report

The *Independent Inquiry into Inequalities in Health* in England, chaired by Sir Donald Acheson (1998), brought together evidence of a close association between income inequality and health. It noted the importance of income, education and employment as well as material environment and lifestyle. In addition, it reviewed evidence that social and emotional support can protect against premature mortality, prevent illness, and aid recovery. In particular, the committee acknowledged that social capital (that is features of social organisation such as civic participation or social trust that facilitate co-operation for mutual benefit) are as important for health as income differentials. The committee put forward a broad spectrum of recommendations, all laudable but unprioritised (Williams, 2000). The inquiry recommended that multidisciplinary approaches involving effective local partnerships between health authorities, local authorities and other agencies are needed to deal with these issues; that joint programmes to address health inequalities are put in place and monitored.

The Government's Commitment to Multi-Sectoral Policies to Reduce Inequalities in Health.

In 1999 the Department of Health published 'Saving Lives: Our Healthier Nation', which made an explicit commitment to tackling inequalities in health through intersectoral collaborative policies. "[The government] believe[s] in working across Government to attack the breeding ground of poor health – poverty and social exclusion – and we believe in creating strong local partnerships with local authorities, health authorities and other agencies to tackle the root causes of ill-health in places where people live." (1999: Ch 1). The government has made a commitment of £290 million for the establishment of health action zones. To date, 26 health action zones have been established to facilitate closer intersectoral

delivery of services in some of the most deprived urban and rural parts of England and Wales. A new Public Health Development Fund of £96 million has also been established to promote innovative approaches to public health, including health impact assessment (Department of Health, 1999).

The New Opportunities Fund of £300 million, established by the National Lottery Reform Bill in 1999, offers an opportunity for public, private and voluntary partners to apply for funding for a network of healthy living centres. Healthy living centres are targeted at deprived areas and have the aim of reducing inequalities, with the requirement that local communities and users be involved in the development and delivery of the projects and, with relevance to this paper, that initiatives be rigorously evaluated in terms of their effectiveness relative to the resources involved in their initiation.

In England and Wales, the government makes it clear that health authorities hold responsibility for establishing health improvement programmes, based on collaborative investment between voluntary agencies, local government and the NHS. The strategy aims to promote integrated working between public sectors. This will mean a new duty of collaboration for local authorities and health bodies, which will lead to agreed responsibilities and accountabilities for promoting improvements in health. Together, agencies will have to agree and monitor how their separate functions should support the health and wellbeing of individuals and communities (Welsh Office, 1998; Department of Health, 1999).

In comparison with total spending on the NHS these sums of money that government has pledged towards addressing inequalities in health are relatively small. However, there is little or no evidence of the effectiveness or cost-effectiveness of such initiatives. More importantly, the opportunity cost of the time of those involved in the management of health authorities, local authorities, voluntary sectors and the reorganisation of institutional structures to facilitate multi-sector joined-up working is substantial.

The Government's Commitment to Health Impact Assessment

Health impact assessment (HIA) has been defined as “the estimation of the effects of a specified action on the health of a defined population” (Scott-Samuel, 1998, cited in Scott-Samuel et al., 1998).

Recognition of the potential wide-ranging impacts of public policy on the health of society has led to recent calls at both European and national government level for prospective health impact assessment of public policies, programmes and projects. Despite the interdependence of environment and health, these areas have historically been addressed separately through a ‘medical’ model of health services designed to meet and treat illness, and through public health and environmental protection legislation focusing on the prevention and containment of accidents and disasters (British Medical Association, 1998). Environmental impact assessment (EIA) has become increasingly common in recent years and for this reason health impact assessments have tended to be bolted on to EIAs. Article 129 of the 1993 Maastricht Treaty requires the European Commission to check that proposed policies do not have an adverse impact on health or create conditions which undermine the promotion of health (Scott-Samuel, 1997).

In 1995 in the UK, the Department of Health published a guide titled *Policy Appraisal and Health*, which set out a framework for other government departments to consider the likely health effects of their proposed policies, programmes and projects. In 1998 the British Medical Association published a policy report calling for an integrated link between environmental impact assessment and consideration of the likely health effects of government policy (British Medical Association, 1998).

More recently in the UK, national policy has been explicit in promoting a wider, more holistic approach to health. The three public health Green Papers (Department of Health, 1998; Scottish Office, 1998; Welsh Office, 1998) explicitly state the requirements for national and local developments to be subjected to health impact assessments.

Environmental impact assessment of aid and development programmes in developing countries have, for some time, incorporated a prospective assessment of the likely impact on the health of the communities to be targeted (Birley, 1995). Such environmental-health impact assessment of projects and programmes in developing countries has traditionally involved the following three stages: (1) the identification of health hazards; (2) the interpretation of health hazards as health risks associated with a project or programme; and (3) the management, minimisation or containment of health risks. Health hazards are seen as the key factors to investigate in HIA. They include five main agents and causes: communicable disease, non-communicable disease, injury, malnutrition, and social illness (Birley, 1995).

Thus, to date, the main focus of environmental-health impact assessment has been on the likely negative influences on health and how policies might be mitigated to effectively minimise and manage risks to health. However, if a framework for health impact assessment is to be appropriate for the prospective appraisal of the likely health impacts of national and local government policy in the UK, it will also need to encompass both the likely detrimental and advantageous effects in the health of communities. It will also need to tackle the issue of the quantitative and qualitative measurement of their likely impact.

Some UK examples of retrospective HIA which have looked at the effects of environmental disasters include the 1993 Braer oil spill and the 1988 aluminium contamination of the water supply in Camelford. It is hoped that the findings of such environmental disasters could be used to inform future prospective HIAs.

Health impact assessment is developing in its own right as a specialised public health methodology. It involves the prospective or retrospective identification and, where possible, quantification of health effects of policies, programmes or projects. What it lacks, though, from the economists perspective, is any underpinning concept of resource scarcity, choice or opportunity cost. Health gains or losses are not routinely linked to the resources devoted to public policies, programmes or projects. This is acknowledged by Joffe (1998), who writes that the ideal HIA would be a comparison of the impact of different policy options

rather than just a description of one single option. This sounds very much like an extension of the cost-effectiveness methodology to policy appraisal used across government.

Research Councils' Calls for Proposals on Inequalities in Health

Recent calls for research from the Economic and Social Research Council (ESRC), Medical Research Council (MRC) and the Department of Health have firmly placed inequalities in health on the research agenda. It would be interesting to know how many health economists have contributed to the submission of bids in response to these calls for research proposals. Although there exists a wealth of descriptive data documenting inequalities in health and a growing quantity of research exploring mechanisms of transmission, intervention studies that examine these factors are rare.

In its 1997 update of thematic priorities, the ESRC prioritised the following areas: economic development, the changing nature of work, the role of social capital in human affairs, economic and cultural definitions of sustainability, lifestyle and the environment, the nature of government and public and private accountability, and inequalities between social groups and between society.

In direct response to the publication of the Independent Inquiry Into Inequalities in Health, (Acheson, 1998), the Department of Health launched its Inequalities in Health Research Initiative (Department of Health, 2000), calling for proposals on: (a) health impact assessment, with specific reference to the impact of non health-led projects, programmes or services on health inequalities; (b) measuring and monitoring inequalities in health; and c) research to inform the development of services or to evaluate existing services for specific communities or population groups with a view to reducing inequalities in health.

The 1999 MRC Health of the Public initiative called for proposals that addressed population-based research into the promotion and maintenance of health, the frequency, burden, and causal pathways of ill health, and the effectiveness of interventions designed to reduce or prevent ill health. Notably, the initiative

encouraged acknowledgement of the resource implications of addressing inequalities in health.

Three Visions of the Future of Health Economics

Three influential visions of the future of health economics have been published during the last decade by Williams (1993), Phelps (1995) and Maynard & Kanavos (2000).

In his vision of priorities for a research agenda in health economics, Alan Williams set out five key areas for change. He proposed that the following questions be addressed:

- 1) What precisely are the objectives of the health care system?
 - 2) How should they be subdivided and assigned to different actors in the health care system?
 - 3) What information do these actors need to discharge their responsibilities properly?
 - 4) Can their performance be measured and monitored accordingly?
 - 5) What incentive structures are appropriate for each actor in the system?
- (Williams, 1993)

Phelps (1995) has argued that health economics needs to undertake a fundamental reformation over the next 20 years that will guide research away from the current focus of the subdiscipline and towards:

- 1) analysis at a disaggregated level, with the emphasis on individual decision making in the consumption of health care
- 2) more original data collection rather than reliance on secondary data
- 3) increased attention on questions pertaining to the supply of and demand for information and on the role of uncertainty in health care
- 4) increased analysis of the structure of health care organisations and of their influence on professional and patient behaviour
- 5) expansion of the range of tools available for the analysis of health care problems

6) a breakdown of interdisciplinary barriers between health economics and other disciplines.

(Phelps, 1995).

Most recently, Maynard and Kanavos (2000) describe Phelps's vision of the future of health economics as being consistent with an evolving paradigm, moving from one of evidence-based medicine to one of economics-based medicine (based on evidence of cost-effectiveness) and incentive schemes to proliferate the incorporation of such information into decision making. They acknowledge the inevitable growth of economic evaluations of health care technologies with the institutionalisation of controls on required evidence on the marketing of pharmaceutical products.

Firstly, they argue for an increased information base on incentive structures in health care is needed in order to ensure that evidence of cost-effectiveness of health care technologies is translated into practice.

Secondly, in response to policy-based structural change across the health care systems of higher income OECD countries, Maynard and Kanavos forecast growing demands for quantitative information to feed into institutional change management, drawing on labour economics and regulatory economics applied to the health care sector.

Thirdly, they comment on the extent of routinely collected institutional data which remains unanalysed and propose the integration of centralised data sources. They argue that economists should be involved in the design of centralised health care information databases to ensure robust foundations for quantitative analysis of health care systems.

Fourthly, Maynard and Kanavos propose the more vigorous application of labour economics to the analysis of health care productivity, the unravelling of incentive structures and the behaviour of health care professionals. They argue that the analysis of interprofessional working through, for example, primary care teams or

community mental health teams would require interdisciplinary collaboration between health economics and, for example, psychology.

Finally, Maynard and Kanavos propose the greater application of regulatory economics to the analysis of optimal regulatory structures of health care systems as a basis for more informed policy.

All three of these visions of health economics as an evolving subdiscipline are almost exclusively concerned with health care. In terms of meeting the needs of health care policy, they focus on: organisational structures; incentives, particularly incentives for the implementation of cost-effectiveness evidence into clinical practice; the design and collection of quantitative data to enable health economists to model and forecast at an aggregated level the behaviour of health care systems, and at a disaggregated level better understand the behaviour of health care providers and the health-care-seeking behaviour of individuals, with particular reference to the influence of uncertainty.

However, one important piece of the jigsaw is missing. If current concern over inequalities in health is more than a passing dalliance with political correctness, then our concern for the efficient use of public health care resources should extend to concern for the efficient use of other public sector monies directed at tackling the root causes of inequalities in health. The final section of this paper takes the liberty of expanding Williams's original schematic representation of health economics to encompass:

- 1) policy requirements for evidence on the relationship between income and health at societal and individual lifecycle level
- 2) the relative importance of the various socioeconomic factors known to determine lifetime health experience
- 3) the cost-effectiveness of public policies aimed to mediate and reduce inequalities in health.

A Paradigm Shift from Health Care Economics to Health Economics

Figure 2 sets out an expanded schematic representation of health economics and owes much to Williams's original diagram. Boxes 1 and 2, at the centre of the diagram, are labelled "Health of Society" and "Health of the Citizen" respectively. They are placed at the centre to reflect 'health' rather than 'health care' as the relevant social want as compared with Williams's original diagram, where the demand and supply of 'health care' are at the centre. Box 1 encompasses evidence of absolute levels of health of society, and distributional issues of inequalities in mortality and morbidity by cause between socioeconomic groups. Seminal contributions to the interdisciplinary literature on the health of societies have been made by Canadian health economists such as Robert Evans and Greg Stoddart (Evans et al., 1994). In his recent Office of Health Economics lecture, Robert Evans (2000) spoke of not only the normative but also the positive importance of inequalities in health as a lever for understanding the effect of policy on absolute and relative levels of health of societies as well as individual citizens' abilities to meet life's challenges and their associated levels of need for health care. Box 1 also encompasses societal views about health as a human right, societal valuation of health states and beliefs about the role of public health care, and the mechanisms for eliciting societal priorities in public spending to improve health to which health economists have made significant contributions (New, 1996; Coast et al., 1996). This box includes the work of health economists who have explored health care as a communitarian or public good, where the externality value of health care is greater than the sum of individuals' utility (Culyer, 1989; Mooney, 1998).

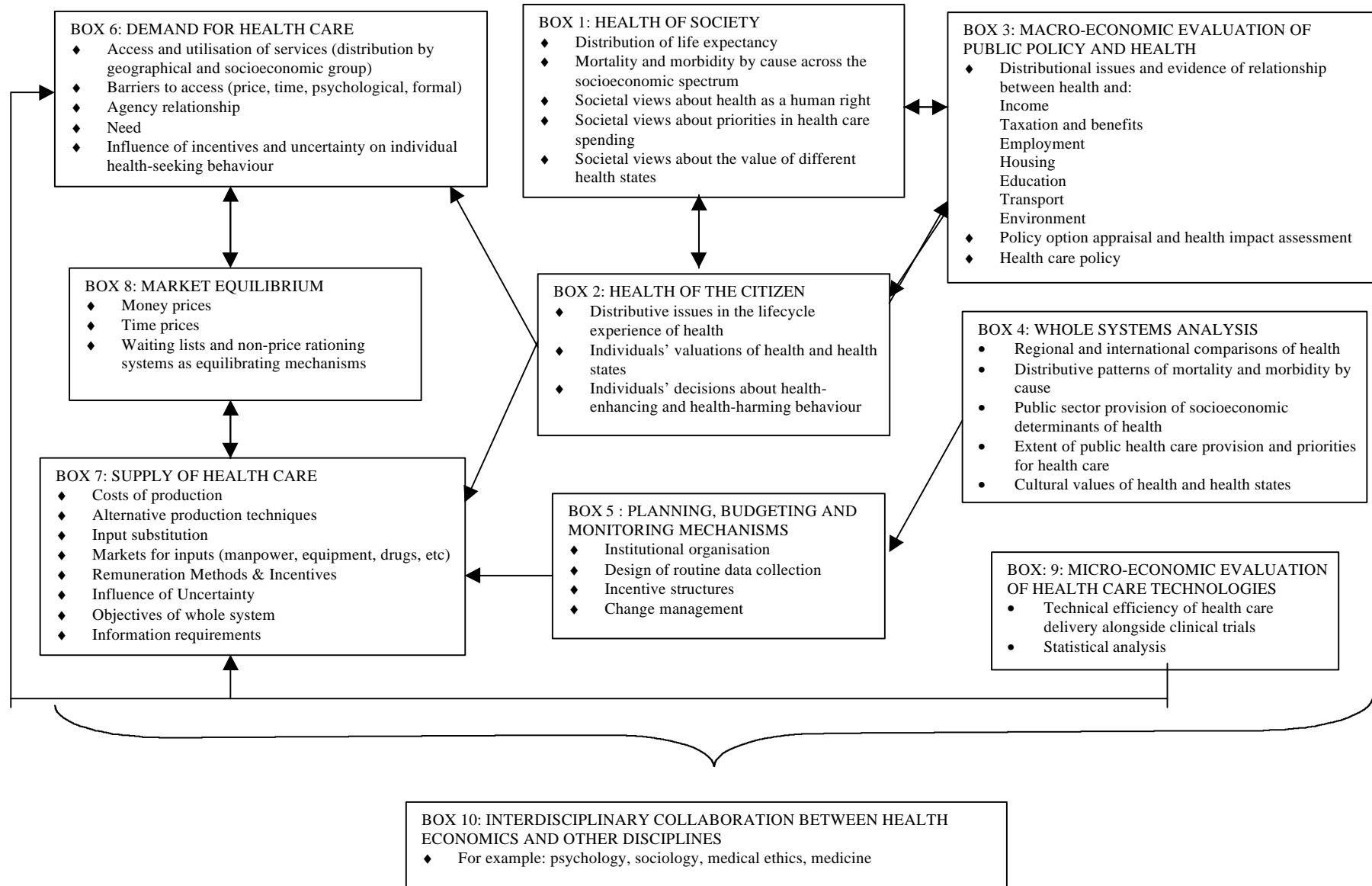
Box 2 encompasses evidence of absolute and distributional issues in lifecycle experience of health of the individual citizen. Phelps (1995) has argued that work on the relationship between education and lifestyle and resultant lifecycle health experience will become more important, building on the work of Fuchs (1982) and on Grossman's original model of the demand for health and health care (1972). Phelps asserts that a better understanding of the role of information in informing individuals' lifestyle decisions about, for example, smoking and

alcohol consumption, will become more important in an attempt to inform people effectively about the consequences of various lifestyle choices. Here Phelps appears to view the role of the health economist as providing information with the potential to improve societal health.

Box 3, labelled “Macro-economic Evaluation of Public Policy and Health”, represents the major expansion of Williams’s original diagram, allowing explicit acknowledgement of the research health economists have contributed, and could in future contribute, to informing public policies which either directly aim to reduce inequalities in health or which have the potential to indirectly (positively or adversely) affect the health of society. This box covers contributions to the health economics literature on: underlying inequalities in income (Atkinson, 1999); the complex relationship between income and health (Birch, 1999); and other socioeconomic determinants of health such as housing (Carr-Hill et al., unpublished), education, the environment, and transport (largely the territory of transport economists to date). In addition, the box covers the work of health economists who have addressed the potential of macro-economic policy on taxation of health-harming substances such as tobacco and alcohol (Godfrey & Maynard, 1992; Buck et al., 1995). Finally, the box encompasses proposals for cross-sectoral programme budgeting and marginal analysis of public health promotion or ill-health prevention (Cohen, unpublished).

Box 4, labelled “Whole Systems Analysis”, covers regional and international comparisons of health and income, distributive patterns of mortality and morbidity by cause, extent of public sector provision of socioeconomic determinants of health, extent of public health provision and priorities for health care, and finally, cultural values of health and health states. See, for example, the seminal paper on income-related inequalities in health (van Doorslaer et al., 1997).

Figure 2: Expansion of Williams's Diagram



Box 5, labelled “Planning, Budgeting and Monitoring Mechanisms”, covers institutional organisation and perhaps in future, based on the visions of Maynard & Kanavos (2000), the design and collection of routine institutional data and professional behavioural change management.

Boxes 6,7 and 8, labelled “Demand for Health Care”, “Supply of Health Care” and “Market Equilibrium” remain mainly unchanged from Williams’s original diagram. Added to these boxes, based on the visions of the future of health economics put forward by Phelps and Maynard & Kanavos, is research into the role of uncertainty in markets for health care and health care insurance, and further research into incentives for consumers of health care in influencing their health-care-seeking behaviour.

Box 9, entitled “Micro-economic Evaluation of Health Care Technologies” covers the range of cost-effectiveness, cost-utility and cost-benefit analysis methods applied to the evaluation of health care technologies, which are increasingly being carried out alongside clinical trials. Three items have been added to Williams’s original diagram here: increasing endeavour by health economists to standardise methods of economic evaluation; promotion of the use of more sophisticated statistical methods (Thompson & Barber, 2000); and the recently raised issue of legitimacy of societal cost-effectiveness analysis (Donaldson et al., 2000).

The final box, box 10, signifies the growing recognition of the need, where appropriate, for interdisciplinary collaboration between health economics and other disciplines (Evans, 2000; Phelps, 1995): for example, in the context of this paper, in the debate on whether the predominant mechanism for translation of inequalities in income into inequalities in health is psychosocial, i.e. determined by one’s relative income status in society; or neo-materialist, i.e. due to the effects of material want (Lynch et al., 2000).

Arrows between the boxes represent linkages between research areas.

Conclusion

This paper is partly a response to the almost exclusive health care focus of three visions of health economics as an evolving subdiscipline, and partly a response to current policy commitments to address inequalities in health. Liberty has been taken in adapting Williams's schematic representation of health economics, which no doubt will continue to be the definitive model of the subdiscipline for students for many years to come. The call for a paradigm shift from what has largely been 'health care' economics to what could be 'health' economics is no more than a personal view offered for debate amongst HESG members. The numerous difficulties, for example, of establishing cause and effect in widening the application of health economics to the evaluation of public policy must wait for a subsequent paper. Although there may be some merit in the arguments put forward here, they are offered in recognition of the magnitude and the magnetism of health service and health policy issues which may continue to prove too strong to allow health economists to redirect their research and educational programmes towards 'health' as the relevant social want rather than 'health care', should they so wish. But it is up to us to "invent wisdom for a new age"(Keynes, 1931 cited in Mannion & Small, 1999).

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