ECONOMIC EVALUATION IN HEALTH CARE: THE FOUNDATIONS, METHODS AND THE CONTEXT IN A HISTORICAL PERSPECTIVE

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CERTIFICATE

This dissertation entitled **"Economic Evaluation in Health Care: The Foundations, Methods and the Context in a Historical Perspective"** is submitted to the award of the degree of **Master of Philosophy** of this university. This dissertation has not been submitted for any other degree of this university or any other university and is my original work.

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Never before was so little done by one fellow despite so much from so many...

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CONTENTS

Acknowledgements

1. **Introduction** 1-5

2. **The Publicness of Health** 6-33
   Externalities, Merit Goods and Public Goods

   A Short History of Public/ Merit Goods in Public Policy

   Special Characteristics of Health as Seen by Health Economists

   Primary Health Care as a Merit Good

3. **Economic Evaluation in Health** 34-53
   A Short History of Economic Evaluations in Health

   Basic Types of Economic Evaluation in Health: An Outline

4. **Economic Evaluation as Applying Utilitarianism to Health: A Critical Appraisal** 54-88
   An Outline of the Theory of Utilitarian Social Ethics

   Utilitarianism in Economics

   Utilitarianism in Medicine and Public Health

   A Summary Critique of the Utilitarian Perspective

   Some Practical Issues in the Application of Economic Evaluations in Public Health

   A Critical Evaluation of Welfarism and Extra-welfarism

   A Summary Critique of the Methods of Economic Evaluation in Health

5. **Summary and Conclusion** 89- 98

Bibliography 99-117

INTRODUCTION

Economics plays a very influential role in decision-making and policy formulation regarding health interventions by means of various priority setting mechanisms. Economic evaluations, a set of techniques that have grown in popularity among the national and international administrators, financial institutions, bilateral donors and International Non-Government Organisations ever since the seventies, have had a major role in reinforcing a medical model of health, apart from upholding the reputation of economics as *the* dismal science. As Beattie (2003: 239) puts it, "an 'evaluative culture' has come to dominate the working lives of staff in statutory agencies across all sectors of public provision of services".

Though in theory, the function of these techniques of evaluation is to promote *both* economic efficiency[1] as well as equity, in practice through history, the former got the better of the latter most of the time. The proposed study aims at reviewing the development of economic evaluation in the area of health as well as discussing the philosophical, methodological, empirical and more importantly, ethical problems inherent in the approach, which makes it hard, and often even impossible, to integrate concerns like equity. It would also attempt to contextualise the evolution of techniques and shifts in the levels of acceptability of the different techniques to the global as well as local decision makers and the academic community over time.

The first chapter examines the concept of publicness with special focus on health, and discusses as to how and to what extent it could be translated to public

[1] Not to be confused with *not-necessarily- economic* social efficiency, which depends largely on the intrinsic values of the society. For example, in an ideal sense, issues like how well a society behaves with its elderly, its children, or the marginalised should determine its social efficiency; and not the *value-for-money* of various state interventions.

health policy. The second chapter describes the methods of economic evaluation which are broadly variants of the cost-benefit approach, with particular reference to health. A summary history of the application of the methods is presented in this chapter, the main objective of which is to choose interventions which would help attain greatest *quantifiable* benefits, directly or indirectly amounting to economic benefits per unit cost. The third chapter starts with an outline of the theory of utilitarian social ethics or utilitarianism, which is the basis of any method of economic evaluation. The chapter moves on to a summary critique of the utilitarian perspective, followed by critiques of welfarism, extra-welfarism and methods of economic evaluation in health.

The role of the World Bank in health has been progressively growing over the last quarter of the 20th century and the trend continues today. The World Bank Group is the world's largest external lender to health-related projects, committing $1 billion dollars annually. Along with proposing and propagating the notion of 'investing in health', a main thrust area of its activity has been fertility control. In addition, the entrapment of the Third World countries in the 'aid and loan market' has very effectively been used by the World Bank Group to change the basic character of their national health care systems through setting up market and quasi-market structures in health.

Corresponding to the promotion of the private sector, structural adjustment policies have also affected the thinking in public health –both in the policy-making and academic spheres. The nineteen nineties saw even the WHO accepting a minimalist position regarding public provision which is in complete harmony with

the World Bank vision. Cost-containment became a major, and at times, the sole criterion of the efficiency of interventions and it was presented as inevitable that a trade-off exists between affecting the causes of diseases and the treatment of diseases.

Due to the incompatibility of economics as a discipline to notions like rights, needs etc. the basic framework that economists follow in health care evaluations is based on utilitarianism, which compresses all valuations into a utility function, seeing everybody as rational economic agents with perfect information, who maximise their utility at will. Its apparent compatibility with the free- market ideology, which sees state interventions in social sectors as anathema, made such evaluations nearly mandatory for state interventions in health, whenever external funding is involved. In health, the Washington consensus of the eighties put forth the view that 'modern forms of rapid economic growth will reliably deliver enhanced population health' despite extensive evidence to the contrary, thus urging a retreat of the state (Szreter: 2004: 75).

Even when explicit external funds are not involved, many governments are now turning to the methods of economic evaluation to justify interventions or the lack of them, which defy epidemiological reason. This happens because the ongoing health sector reforms with their commitment to the market are changing the state itself, from the role of a provider of social amenities, to a supporting, *client* role vis-à-vis the dominating private sector (Qadeer 2005). Unfortunately, mainstream economics' obsession to produce a 'social physics' perfectly fits in here, both by promoting the

retreat of the state using the efficiency argument, and also by reprioritising the interventions in such a way, that would maximise the subsidies to the *private* sector.

The discussion that follows is necessarily tentative and preliminary in nature. Many more arguments need to be surveyed, fleshed out and empirical work needs to be critically looked at. Nonetheless, as an area that needs to be ventured into, it is hoped that this dissertation has taken a firm, if small, step.

CHAPTER I

THE PUBLICNESS OF HEALTH

The division of the *public* and the *private* as two separate spheres dates back to the attempts of the early liberals in the nineteenth century to demarcate an area of activity in which the state would not interfere, and it still continues to rule the popular imagination (Mahajan 2003). Nevertheless, the wall that separated the two has historically been porous so that 'what was called private at the beginning of the 19th century became more and more open to public concern and intervention during the course of the century.' (Frevert 2003: 77). This complex process of shifting boundaries continued in the twentieth century also, as it was observed,

> ...the public-private partition is neither fixed, nor natural or obvious. Historically, the boundaries have been drawn and redrawn. The Keynesian welfare state was one such attempt in post-War years and now another attempt is being made. The Keynesian state asserted the primacy of the public over the 'invisible hand' of the market and engendered expectations that the state was responsible for meeting the basic needs of citizens. The current attempt tends to reverse this formulation and seeks to rearrange public and private by shrinking the state and expanding the autonomy of the market. The neo-liberal agenda stresses the primacy of the market in generating a new social order.
>
> (Mathur 2003: 277)

While this process has been largely politico-economic in nature, it had a substantial influence on economics as a policy science. Partly as a result, a definitive classification of entities into public or private became as uncertain in economics as in any other domain. For that reason, the division between private and public goods is considerably hazy in the existing economics literature and it has been suggested that goods could more conveniently be seen as a public-private good continuum rather than two exhaustive categories (McPake et al, 2002). Although it is widely

acknowledged by economists that it is practically difficult to come across purely private or purely public goods in the real world, there had been a dichotomisation of mainstream theory, when the focus largely remained on the extremes. As Hirschman (1998: 17) puts it, 'little attention was paid to goods that would somehow be intermediate between the private and the public category or would belong to both.'[1] Quite debatably, the literature on public goods takes national defence and the system of property ownership rights to be two of the very few classic examples of pure public goods that one could encounter in the existing state of affairs.[2]

Conventional economics has always preferred a very minimalist interpretation of health having any public characteristics. There has been significant agreement in considering *basic* preventive medical care- immunization for example, or vector control as public/merit goods and justifying their public provision. Nonetheless, a broader consensus has not been forthcoming and global political commitment to public/merit goods, in real terms, has been waning over time. This chapter would look at the concepts of externalities, merit goods, public goods and the notion of publicness in health. It would go on to illustrate the characteristics of Primary Health Care that qualifies it to be considered a merit good.

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[1] See Hirschman, Albert (1998), *Crossing boundaries: Selected Writings*, Zed Books, New York, cited in Mahajan, Gurpreet and Reifeld,Helmut (2003) op. cit. and Kaul, Inge (2001), "Public Goods: Taking the Concept to the Twenty-first Century", in Daniel Drache (ed.) *The Market or the Public Domain,* Routledge, London and New York, pp. 255-273.

[2] Incidentally, the system of property ownership rights is the hub around which the entire *private* market system operates.

Externalities, Merit Goods and Public Goods

Private goods[3] are defined as those that are rival in consumption and have excludable benefits for the consumers. In other words, consumption of a private good by one member of a society reduces the total supply of it for others and also, people can be excluded from consuming it. Access and ownership to private goods could be made conditional on paying a price that is determined by the market. As a result, most private goods have ownership or property rights linked with them (Kaul and Faust 2001).

An externality arises when a consumption or production decision causes costs or benefits to people other than the person or unit making the decision. There can be both positive and negative externalities depending on the consequences of these spill-over effects. Externalities are considered to be causes of inefficiency in the market, since they call for non-market exchanges. Immunisations are an oft-quoted example of positive externalities since "the fewer the number of carriers in the population, the smaller is the likelihood that an uninfected individual will become ill" (Jack 1999: 168). As the overall efficiency of an immunization programme greatly depends on its coverage or reach, a prospective *market for immunization* becomes an unfeasible proposition, since the market *per se*, operates on the principle of exclusion - based on the individuals' ability to pay. Given the fact that the broader social benefits of a universal immunization programme greatly exceed the consequential benefits of a private immunization market, state intervention, here as a provider of universal immunization, is called for.

[3] Here, and throughout the discussion, goods refer to both goods and services.

Merit goods are those goods which have positive externalities associated with them and thus, it is socially desirable for the citizens to have access to them. Unlike the notion of public goods discussed presently, which is purely *positive* in nature, the concept of merit goods is more *normative*, stating what ought to be the case (Smith et al 2003). It has been observed, 'as a precondition of their existence, and embedded within their very definition, merit goods make reference to and depend upon normative disciplines like ethics' (Nowacki and Eecke 2004). Merit goods form a group of goods, whose consumption should not depend upon the ability or willingness to pay, since people, by means of being citizens of a state have positive rights to them (Dasgupta 1993). Merit goods are alternatively defined as "goods or services where government believes individuals should not be allowed free choice of whether to consume because of lack of information about their effects"(Mills and Gilson 1988: 129).

The origins of the concept of merit goods in economic theory- a tax-subsidy regime supporting the provision of various goods with differing degrees of publicness- could be traced back to the beginning of the twentieth century when Pigou published his monumental works on social welfare.[4] He proposed an objective minimum of living conditions, below which no citizen should have to fall. According to him, "(T)he minimum includes some defined quantity and quality of house accommodation, of medical care, of education, of food, of leisure, of the apparatus of sanitary convenience and safety where work is carried on, and so on" (Pigou 1932: 759). These were to be financially supported by a mixture of taxes and subsidies, thus *internalising* the externalities involved.

[4] A history of the *practice,* which dates further back, would be discussed presently.

In the case of merit goods, the objective of the public policy should be to achieve an allocation of resources which would be markedly different from what would have been determined in the private market operating by the principles of consumer sovereignty (Santhakumar 1988). Musgrave, who introduced the concept of merit goods to economic theory, has noted that there are situations "where an informed group is justified in imposing its decision upon others" (Musgrave 1959: 14). The concept of merit goods is based on the notion that instances are possible when social benefits are in excess of a summation of individual benefits calculated in the consumer sovereignty framework. Or in other words, there is a possibility that people who make use of these goods or services 'benefit from it to a greater extent than they themselves believe' (Santhakumar 1988). According to Musgrave,

> The concept of merit goods questions that premise [of individual preference/consumer sovereignty]. It thus cuts across the traditional distinction between private and public goods. A more fundamental set of issues is raised, issues which *do not* readily fit into the conventional framework of micro theory as based on a clearly designed concept of free consumer choice.
>
> (Musgrave 1987: 452)

Merit goods could be excludable or/and rival and thus could be provided by the market, but the prospective buyers may not manage to have the purchasing power or even when they do, may not feel it necessary to purchase these goods. Here the state comes in, producing and providing merit goods or subsidising the private sector to do the same. Lately, there has been recognition of the special characteristics of such commodities from some leading economic theoreticians such as Arrow, who commented, "Regardless of our all-embracing market theories, we economists must recognise that there are goods that might be bought and sold but are not" (Arrow 1997: 765)

Merit goods have traditionally been, and continue to be, a category where public provision is broadly accepted without many objections across the political spectrum. While people from various ideological persuasions have had a tentative agreement in accepting public provision of merit goods as such, the definition of merit goods- the characteristics of a good or service which acquires it the status of a merit good, has constantly been under attack. While on paper, nobody ever questions the legitimacy of public provision of merit goods *per se*, peculiarly, a steady narrowing of the working definition of merit goods has been the order of the day. This contraction, when juxtaposed with the apparently innocuous efforts of a broadening of the public sphere[5] -by incorporating NGOs, voluntary organisations, and other civil society organisations, becomes even less benign. As the former severely limits the manoeuvrability of the state in social sectors, the latter promptly supplants the governmental with the non-governmental. The continuing abbreviation of the working definition of merit goods and the colonisation of the *public* by NGOs and civil society organizations have been the twin engines of the strategy that has largely undermined the presence of the state in the health sector over the last quarter of the twentieth century.

While merit goods would be under-produced in a free market system, public goods, on the other hand, would often not be produced at all. Sufficient private production of public goods will not occur as the benefits are indivisibly spread across the population and no single firm has an economic incentive to provide the good. This is because they are goods that display two particular characteristics namely, non-rivalry and non-excludability. Non-rivalry means that consumption by one person

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[5] See Sengupta, Arjun (2003) for a good example. in Mahajan, Gurpreet and Reifeld, Helmut (eds), *The Public and the Private: Issues of Democratic Citizenship*, Sage Publications, New Delhi.

does not reduce the amount available for others in the society and non-excludability means that once the good is provided, it is infeasible to prevent people from consuming it even if they do not pay (McPake et al, 2002). Notwithstanding the similarities, unlike merit goods, the notion of consumer sovereignty is taken to apply in the case of public goods (Musgrave 1987). Communicable disease control measures could be termed as a perfect example for a good that is non-rival as well as non-excludable, since protection is often area-specific and exclusion using market criteria unworkable. In addition, consumption by one does not necessarily reduce the potential consumption by another. Even if such goods are produced by the market, the provision tends to be largely insufficient. This necessitates the government to intervene so as to encourage the production and provision of such goods.[6] Production and provision of public goods has historically been the economic *raison d'être* for the existence of the state and the rationale for the imposition of taxes (Samuelson and Nordhaus 1998).

In the extreme case, when both the characteristics of non-rivalry and non-excludability are possessed absolutely by a good, it is termed as a *pure* public good. But in the real world, pure public goods are hard to find and the goods that are termed as public goods are often impure or quasi-public goods. The connection between public goods and externalities is also important: a pure public good is an extreme example of a positive externality (Samuelson and Nordhaus 1998). It follows that the utilization of public/merit goods like disease eradication programmes such as smallpox and polio as well as effective treatment of infectious and communicable diseases would have considerable positive externalities. These positive externalities

[6] This makes public goods a *subset* of all the goods that have positive externalities, a purely economic category, while merit goods as a category is as much ethical as it is economic.

could be direct or indirect, the former being reduced exposure to others in the society and the latter, the well-being enhancing effect of a healthier environment.

It has to be added here that even though non-excludable goods are usually found to be non-rival, the converse may not necessarily be the case as it is often possible to exclude individuals from consuming a non-rival good (McPake et al, 2002). A football match at a stadium or a movie show at a theatre would be good examples for the non-rival but excludable goods[7]. Coming to health, medical knowledge could be seen as a good example; though it is clearly non-rival in nature, access to it could be made conditional to many factors- purchasing power being the most evident in the present-day situation (Ghosh 2003a and 2003b).

The non-rival nature of a good brings about a situation when the marginal cost of the supply of it has to fall to zero for each consumer after the first one. In many of the cases, though excludability is a possibility, it is prohibitively costly. Now, it is theoretically possible for a consumer to hide his/her preference, declare zero value for this good at the point of acquirement and choose not to pay for it.[8] This is the classic *free rider problem* and in effect, the private production of public goods results in positive externalities which are not rewarded and consumers can potentially benefit from public goods without providing adequately to the production. This would mean that there is insufficient motivation for the private sector to produce it willingly. This situation is known in economic literature as market failure.

The case of private health insurance could be used to illustrate the point. In a perfectly functioning insurance market, low risk groups within the population have a

[7] In economics literature, these are called *club goods*.

[8] Since the price equates the marginal cost at zero, this cannot be prevented, theoretically.

propensity to opt out of the market.[9] This is in part the outcome of the fact that people are better informed of their own health condition than insurance companies. This case of adverse selection pushes up the average risk involved as well as the cost of insurance thus excluding a large proportion of the population, leading to market failure. Thus, private insurance companies spend substantial amounts of money not on providing medical care, but on refusing insurance to those who need it most, by means of rigorous screening procedures (Krugman 2005).

Another issue in health, discussed widely in literature as leading to market failure is the moral hazard problem. It is claimed that, when insured or protected against potential risk, people have a tendency to squander, just because there is an *incentive* in doing it. This happens because at the point of use, the consumers are facing zero prices. The obvious reference here is to the conventional wisdom that a lower price invariably increases quantity demanded- the operation of the law of demand itself leading to inefficient markets. The popular over-use argument against free provision of medical care by the state is also along similar lines.

It has long been recognised that many goods that are generally termed as private or public ones do not strictly fit into either definition. Generally, numerous goods share characteristics of both private and public goods at the same time and thus are mixed goods with varying degrees of publicness (Holtermann 1972). It could therefore be stated that the theoretical classification is not precise; thus appeals to *common sense*[10] are made, not infrequently, in papers dealing with the theory of public goods. In the light of all these factors, it was concluded elsewhere that

[9] Partly because the pricing of the health insurance policies is based on average costs and not marginal costs.

[10] For example, Holtermann(1972), in the middle of a *very* theoretical discussion, states, "The dividing line, of course, is not clear-cut and common sense must be used to classify those goods where it is possible..." Page 82.

"standard definition of public goods is of limited analytical, and therefore also, limited practical political value" (Kaul 2001:256).

A Short History of Public/ Merit Goods in Public Policy

As far as mainstream economic literature is concerned, the theory of public goods is of recent origin as it was formalised by Samuelson in the early fifties. As regards the policy science, during the mid-twentieth century when Keynesianism was fundamental to the discipline of policy economics, the state was seen to be playing a leading role in the economy, even in the so-called liberal democracies. The next stage, which started in the middle seventies, saw crises across the world, and has been marked by a rebalancing between markets and states. From this stage, there has evidently been a progressive retreat of the state from the social sectors. Furthermore, this era has been marked by the process of marketisation of certain government interventions that had public/ merit good characteristics. There has been a conscious effort to blur the lines between public and private and non-state players have been roped into the provision and production of these goods in a big way, often with a clear negative impact on the collective welfare of the society.

Even if the theory of public goods is of recent origin, the practice dates back to the middle ages when many traditional societies used to maintain open, common grazing and hunting grounds (Kaul and Mendoza 2003). These practices were seen to be instances where the collective right to survive overshadowed individual rights to 'possess, exchange and accumulate'. Over the course of time, however, the importance of the notion of common property resources got progressively

undermined, as transferability of properties and resources was a pre-condition for the transition to capitalism (Lohmann 2003). It was observed;

> Commodification meant chipping away at the commons matrix to make room inside for a more impersonal, abstract, seemingly less embodied economic logic featuring balances of trade, exchange rates, foreign gluts and distant, unseen buyers. Prices set by regional supply and demand began to supersede local bargaining power, and long-distance commercial contracts to compete with local ties of obligation. Theorists flouted the authority of nobles by publishing mathematical tracts.... In some ways, "the market" became more real than markets
>
> (Lohmann 2003)

State initiatives with the characteristics of public goods had started as utilitarian responses to severe epidemics such as the Black Plague of the fourteenth century in Europe. These interventions invariably had a public health character as these included sanitation, quarantine and health certificates (Desai 2003). The Poor Law of 1601, which aimed to protect the British citizens from local famine, was a major landmark in British policy (Szreter 2004). The loss of the natural social safety net that was provided by common pasture and woodland as mentioned already contributed to the "bread riots" that shook England throughout the 17th and 18th centuries. These riots were a proof to the fact that the Poor Law of 1601 that provided subsistence to the needy was largely inadequate (Lohmann 2003).

The period around the eighteenth century saw the extent of social interventions, particularly in the cities, being stepped up as the industrial revolution in England was happening concurrently with popular revolutions in France and North America. These two revolutions "created the notion of the citizen as a source of political power whose approval was vital for the legitimacy of any rule" (Desai 2003: 67). An enhanced

presence of the state in social sectors was by then, seen as the surest way of put on hold the possibility of a popular upsurge and the overthrow of the ruling elite.

At around this time, Adam Smith had made a strong appeal for the state provision of education and to this, other needs such as roads, water, sanitation, housing, transport etc. were added. The strong social negotiations that followed involved reformers, political movements, trade unions, and health and sanitation experts and these enhanced the state's presence in the social sectors all along the nineteenth century also. The demand for many of these negotiations was largely set by the Chartists, a group who were aiming at radically transforming the political structures at the time.

The early public health movement is usually linked with Edwin Chadwick's name, who, in a sharp break from history, equated public health with 'building of sanitary systems, especially water supplies and sewerage' (Hamlin and Sheard 1998: 587). In a time of constant outbreaks of various epidemics like cholera, his minimalist agenda of sanitarianism had many takers in the respective governments of the time, who saw it as an affordable remedy for the growing menace of Chartism, which was, by then, taking a revolutionary beat.[11] His efforts and the subsequent Germ Theory of disease causation led to the dismissal of a broader understanding of the causal factors of ill health, in favour of a "narrow laboratory perspective of a specific cause model" (Susser and Susser 1996: 670). Despite contributing in no little way to the individualisation of public health, the Chadwickian Revolution contributed to a greater state involvement. In fact, the Chadwickian justification of public health spending, which had an explicit utilitarian objective could be seen as a marker insofar

[11] For an indication of the potential Chartist "*menace*", see Engels, Frederick (1842), "The Position of the Political Parties", *Rheinische Zeitung,* No. 358. and (1842), "The English View of the Internal Crises", *Rheinische Zeitung* No. 342.

as it brought in the notion of the *economic* into health in that it was cheaper for the State to make do with a number of specific interventions rather than allow the death of the male breadwinner due to Cholera, since the latter prospect meant that the family was on the Poor Law rolls, a drain on the exchequer (Susser 1993 and Hamlin 1996).[12]

The goods in question here were not absolutely non-excludable or non-rivalrous but their provision was beneficial to the society as a whole and their non- provision had negative externalities (Desai 2003). The provision of these goods with public/ merit good characteristics had clearly political reasons. As Desai puts it:

> *....The first such goods in modern times were oriented toward urban, working class citizens. Fear of the mob—of fast-growing urban populations— made European states provide such goods even while they preached the doctrine of laissez-faire and balanced budgets. Thus it was a question not so much of gauging the preferences of consumers as of guessing what was needed to keep them from revolting— an elite response to democratic but extra-parliamentary pressure*
>
> (Desai 2003: 68)

Thus, the ever- present prospect of a possible revolution has been the guiding force of almost all the welfare measures in the nineteenth century and even during the thirty year period after the inter-War years of the twentieth century, which came to be known as the Golden Age of Welfarism. All through the so-called Golden Age, the impact of the spread of communism in the Third World was apparent in the policies of the developed countries.

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[12] See Susser M (1993), "Health as a Human Right: An Epidemiologist's Perspective on the Public Health", *American Journal of Public Health*, Vol. 83, No. 3, pp. 418-26 and Hamlin, Christopher (1996) "Edwin Chadwick, "Mutton Medicine", and the Fever Question", *Bulletin of the History of Medicine*, Vol.70, pp. 233-65.

It was noted that 'from the early twentieth century, a new collectivist political will promoted increased state intervention in the provision of welfare in industrial societies' (Porter 1999: 230). In the case of Britain, this was partly a result of the potential embarrassment of a 'national degeneracy', accentuated by the shame at the Boer War recruitment, when a large number of recruits were declared unfit for military service, and also, the American and German competition to Britain's economic superiority. The causes of the humiliation at the military front were easily identified; the substantial underclass which was considered 'the major source of disease' (Richman 2003: 13). The public health movement, along with the eugenics movement, were efforts of the elite middle class to curb the growing political discontent of the 'dangerous classes'- the former did it by offering palliatives for the so-called 'social evils' while the latter chose the easier alternative, curbing their number itself.

The initial stages of the twentieth century saw the importance of the state increasing progressively and as a result, the state's share in the national income rose from negligible amounts in the 19th century to about half or more in many of the developed countries. During this time, the goods that were already provided publicly, such as roads and education, were provided more generously and comprehensively. Also, public provision was broadened to new areas, such as health, housing, higher education, and other social services (Desai 2003). In 1921, the Soviet Union put up the first totally state-owned and state-financed health service system that far outperformed the national insurance model or the British model of a centrally financed and locally administered system, which came into being a quarter of a century later (Susser 1993).

William Beveridge, who was also involved with the Poor Laws Report[13] of 1909 submitted his famous report in 1942 which defined social security as "freedom from want", though in terms of actual provisions the focus was on health, rehabilitation and allowances for children (Beveridge 1942). Interestingly, the Bhore Committee Report of 1946, which marked the beginning of health planning in India, was prepared in line with the Beveridge Committee Report. The notions of fairness were partially introduced into policy analysis and health and education were begun to be seen as basic rights having inherent values. The provision by the State, supported through progressive taxation was seen as a way of distributing risks more equitably between different social groups and different geographical regions. Also, it was proposed that a healthy and skilled population creates significant public and private benefits to the society, private benefit mainly being the increased economic productivity.

The interwar years saw increased state intervention in various social sectors, particularly an expansion of programmes of support for nutrition through rationing and also, of health care. The centrally financed and state owned health service system of Britain, the National Health Service was born during this period. Studies have shown that in spite of being periods of low per capita food availability, these periods of war were marked by significant health improvements. In fact, as shown in the following figure, the gains in life expectancy have been greater in the war decades when compared to the normal decades (Sen 2000).

[13] For a discussion, see Boyer, George R (2004), "The Evolution of Unemployment Relief in Great Britain", *Journal of Interdisciplinary History*, Vol. 34, No. 3, pp. 393–433 and Harris, Jose (1992), "Political Thought and the Welfare State 1870-1940: An Intellectual Framework for British Social Policy", *Past and Present,* No.135, pp.116-141.

Figure 1.

Longevity Expansion In England and Wales		
Decade	Increase in Life Expectancy per Decade (Years)	
	Male	Female
1901-11	4.1	4.0
1911-21	6.6	6.5
1921-31	2.3	2.4
1931-40	1.2	1.5
1940-51	6.5	7.0
1951-60	2.4	3.2

Source: (Sen and Dreze 1999: 182)

The argument that war induced faster economic growth could have triggered these gains may be ruled out as it was empirically shown that 'the decades of fast expansion of life expectancy happened to be periods of *slow* growth of gross domestic product per head'(Sen 2000: 51). Also, important research in the seventies showed very clearly that 'during the course of the 20th century rises in societies' overall investments in health-promoting technology and services—much of it state-organized and funded—was a more significant source of gains in average life expectancy than their rising per capita incomes'(Szreter 2004). These examples underlining the importance of state intervention are of greater significance today, as one of the main arguments that seek a rollback of the state from social sectors is that economic growth would in itself take care of social needs of the population and would improve quality of life.

By the seventies, the Golden Age of Welfare State was declared to have come to an end. The beginning of the eighties saw the emergence of neoliberalism as the dominant orientation in public policy. Neoliberalism, characterised by a vigorous promotion of markets, was a chief feature of the US and the UK governments under Ronald Reagan and Margaret Thatcher respectively (Global Health Watch 2005). Global institutions such as the IMF and the World Bank started propagating it in the

Third World as a panacea for all their problems with governance, letting the market handle provision of essential services and public goods, obviously, at a price. As it was noted, 'concerns with neoliberalism relate to the weakening of governments' ability to discharge their public duties such as reducing poverty; protecting the public and environment from unregulated economic activity; and providing a fair framework for the redistribution of wealth and profits'(Global Health Watch 2005: 61).

The working definitions of private goods and public/ merit goods have undergone tremendous changes during the recent decades. The processes of economic liberalization and privatization have permitted markets to sneak into new product areas, to push out the state from the erstwhile social sectors and to acquire and move profits across national borders, often contravening national interests. The process of marketisation of health care and health has brought with it new disguised methods of rationing. The World Bank had put forward a strategy in the *World Development Report-1993* in which the Third World countries were directed to focus on those areas of health care where the maximum addition in terms of Disability Adjusted Life Years (DALY)[14] *per dollar* is possible (The World Bank 1993).

Special Characteristics of Health as Seen by Health Economists

Health, as a consumer good has long been seen as extraordinary, and indeed unique, since it is considered to be one of the "essential ingredients in human welfare" (Mushkin 1962: 96). By the middle of the twentieth century, various influential international organisations like WHO, UN-ILO and UNESCO started seeing health as an implicit component of a standard of living. The reason given was that "when [wo]man does not have sufficient vitality to function normally, other consumption

[14] DALY, which we shall discuss soon, was presented as a way to conceptualize and calculate the global disease burden and to relate this burden with health and other social policies [Ruger (2005)].

loses its significance" (ibid : 96). The WHO's oft-quoted definition tried to integrate the biological standpoint to the social standpoint in viewing health.[15] But usually, economists try to circumvent the complexity of dealing with such a broad definition by shifting the point of reference from health to health care.

Kenneth Arrow, whose article in the *American Economic Review* in 1963 inspired the sub-discipline of health economics, stated explicitly that the subject in discussion is the medical care industry only and not health in general. He nonetheless acknowledged, "the causal factors in health are many, and the provision of medical care is only one. Particularly at low levels of income, other commodities such as nutrition, shelter, clothing and sanitation may be much more significant" (Arrow 1963: 941). He considered medical care or health care as a special commodity mainly on five grounds:

1) It was observed that health care is an area marked by irregular and unpredictable demand. Moreover, the demand for health care is derived demand, derived from the demand for health.

2) The expected ethical behaviour of the physician was seen to be quite different from standard economic theory as self-interest is not the accepted norm of the agents in question.

3) Product uncertainty and asymmetry of information between doctor and the patient,

4) Unique supply conditions exist in health care,

5) Lastly, it was claimed that extra-economic and sometimes philanthropic interests guide pricing practices.

[15] "Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity."

AJ Culyer in his influential article defines health care as "the kinds of service provided by surgeons, physicians, nurses, hospitals, etc" (Culyer 1971: 189). He classifies three sets of characteristics that make health care distinct. Firstly, he maintains that the notion of consumer rationality, which is so central to welfare economics, has difficulties fitting into the field of health care. This happens because of three so-called 'impediments', namely;

1) lack of information about sickness

2) Inappropriateness of a consumers' sovereignty model in a field where potential *consumers'* physical and sometimes mental capacities are curtailed by illness. And,

3) Irrelevance of revealed preferences in emergencies.

The second point he raises is about uncertainty, in which he more or less follows Arrow's arguments. The last set of characteristics that Culyer mentions as making health care distinct are the externalities involved. He refers to the case of communicable diseases where the benefits from immunization of one individual accrue to the whole society. He also brings up the question of the focus on building a long-run capacity of health care facilities rather than one that just caters to current needs. But more importantly, the problem of a person's preferences or circumstances making him or her vulnerable to a hazard is addressed. There can be social as well as economic causes to this, and he offers a two-fold solution whereby on the one hand, health has to be regarded as a merit good with the state imposing choice and on the other, by assessing the properness of any given income distribution with efforts like taxes on some demerit goods which have patently redistributing effects. He calls for a "..far more extensive use of cost-effectiveness and cost-benefit analyses to improve

extant institutions and to improve understanding of their general efficiency.." (Culyer 1971: 208).

Primary Health Care as a Merit Good

The International Conference on Primary Health Care which took place at Alma Ata in 1978, jointly sponsored by the World Health Organization and the United Nations Children's Fund, came out with a joint report and a statement that was later to be known as the Alma Ata Declaration, an assertion of the broad notion that care provided by health services is only one among the many contributing factors to health. The Alma Ata Declaration was seen as an explicit recognition of the need for universality and comprehensiveness in health as learned from the obvious failure of various vertical disease programmes in meeting the health needs of common people. Furthermore, it was seen to be yet another effort to deal with the possibility of broad political movements and revolutions in the Third World that had already started in the 1970s, preventing a domino effect (Navarro 1984). Many principles of Primary Health Care were assimilated from the successful experiences of China, Cuba and several Latin American countries. The Alma Ata document defined Primary Health Care as:

> *'...essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system*

bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process' (WHO 1978).

The Alma Ata declaration was seen as a politically loaded document since it allowed for the future possibility of conflict and change, even as trying to establish collaboration rather than control. The Primary Health Care approach regarded the populace as a group of individuals influenced by their environment, who have the ability to contribute in their own healing process (Qadeer 2001). It considered health as a fundamental human right and contended that the health of the population is a pre-condition for sustained economic and social development.

The Alma Ata declaration envisaged "health for all by the year 2000" suggesting that by that time everyone in the world would have achieved a certain minimum level of health through access to ample nutrition, safe drinking water and sanitation, literacy, health education and basic health services. The basic tenets of Primary Health Care, also termed as *Comprehensive* Primary Health Care following the later emergence of a narrowed-down, eviscerated version, can be summarised as follows:

- A commitment that the distribution of resources for health and healthcare will be on an equitable basis;
- The total population is to be covered with basic health services –both preventive and curative, comprising of multi- level medical care;
- A multisectoral and intersectoral approach that would incorporate the Primary Health Care into larger development plans.
- An emphasis given to the overall *promotion of health* shifting focus from mere absence of disease, and endorsement of need-based, socially acceptable services in this regard ;

- Use of *affordable technology* in achieving health objectives through the setting up of a referral system, thus ensuring self sufficiency and effectiveness; and,

- Promoting *collective involvement* in health activities, through programmes that focus on long-term social development through empowerment of communities.

- Lastly, an implicit assumption of the State being an overriding presence in health with *direct* responsibility (Qadeer 2001 and Braveman & Tarimo 1994).

The notion of equity mentioned above meant that a basic minimum level of nutrition, adequate supply of drinking water and basic sanitation as well as basic health services must be accessible to all people without taking into account their capacity to pay. Equitable distribution of health services also meant shifting the health services from urban areas where they are concentrated to the rural areas, thus improving the accessibility of the vulnerable groups of people in the rural areas even while bearing in mind the plight of the urban poor who are concentrated in the slums. The Primary Health Care approach considered not only geographical accessibility but financial, cultural and functional accessibilities as well. It also discussed the need of there being *permanent* forms of health care for the poor, disadvantaged people who constitute four-fifths of the world population living in rural areas and urban slums. There was also reference about the need for intersectorality in planning and for Primary Health Care and the social and economic development process being mutually supportive.

Another important constituent of the Primary Health Care approach was the understanding that community participation must be a pre condition for effective universal coverage. The planning, implementation as well as maintenance of the

health services were to be visualized with a significant involvement of the local community. The need for developing intersectoral linkages and coordination was also very important, as all elements of Primary Health Care, a broad concept that includes nutrition, drinking water, sanitation etc. cannot be expected to be provided by the health sector itself. This brought forward the importance of centralised planning as far as the coordination of various services is concerned. Even though the concept of decentralization was an important element of Primary Health Care approach, an optimal combination of centralised and localised planning has been envisaged.[16]

The use of available and appropriate technology rather than the most advanced technology had been given main emphasis in the Primary Health Care approach. By technology, an association of methods, techniques and equipment that can contribute significantly to getting rid of a health problem was implied. In addition, the Primary Health Care approach asserted that one can never examine technology in isolation to the people using them. Appropriate technology now became a kind of technology that responded to the community's health needs- rather than a particular section's needs, without creating much of a squeeze as far as the resources available to the community were concerned (WHO 1978). In short, it can be said that Primary Health Care, being different from any approach which made use of limited technological interventions to get rid of disease, concentrated on the broader developmental goals of the society which had a direct influence on the quality of life of the people. To achieve its aim, the Primary Health Care approach put forward equity, basic needs, intersectoral developmental linkages, and peoples' participation as the major means (Qadeer 1994).

[16] Here, decentralisation is not synonymous with localisation, used often to undermine the notion of centralised planning.

Primary Health Care has, *inter alia,* many features of publicness as well as apparent externalities, thus making it a merit good- a type of non-private good that should be a birth right to any citizen. All around the world, Primary Health Care has traditionally been seen as a merit good and thus been provided by the state in varying degrees. In Scandinavian countries, education and healthcare have been almost entirely provided by the state. However, in a majority of countries, the public sector and the private sector existed side by side in both production and provision of merit goods (Blomquist and Christiansen 1999). This situation stimulated the classic debate – State versus Market- as to who can guarantee efficiency in the production and provision of merit goods like health care services. Those in support of state intervention were the *paternalists,* whose main argument was that since health care has unique economic and social characteristics that make distribution through a competitive market largely untenable, free provision of the state could be justified. The *liberals*, who argue against state interventions, contend that health care is a purely private good and thus the production and provision of the various components of it should be left to the free market (Narayana 1991).

Traditionally, economics has largely been unsympathetic towards paternalism and its outcomes on the population. This has been happening to such an extent that among mainstream economists, paternalism is said to have been considered as an abusive term. The impact has been such that there were only a small number of attempts by economists to incorporate paternalism to the more serious discourses of the subject by means of rigorous economic analysis (Burrows 1993). Paternalism has been criticised for the possibility of a potential 'government failure', analogous to that of 'market failure' where the government is unable to efficiently allocate goods –largely because too many resources being allocated to some particular merit/public good's production.

Burrows suggests that "one reason for economists' lack of enthusiasm for paternalism may be that the possibility of justifying paternalism through rational discourse would threaten the welfare economics framework in which they have invested a good deal of intellectual capital" (ibid: 542).

There have been criticisms of the concepts of merit goods and paternalism and the underlying need-based approach *per se* from other quarters as well. For example, Mooney maintains that the notion of merit good is an expression of the assumption that the laymen are ignorant about what is good for them, and this ultimately paves way for the imposition of some elite's- predominantly doctors, judgement on what their preference should be (Mooney 1986). A merit good, according to some economists, "is any item of public expenditure that seems socially reasonable but cannot be accounted for within the ordinary economic theory of demand. It is a kind of formalised escape clause" (Margolis 1982). But it has to be noted here that there have indeed been efforts to formalise the theory of merit goods with approaches that contravene the principle of consumer sovereignty (Sandmo 1983 and Fiorito and Tryphon 2004).[17] Also, though anti-paternalism flourishes in situations of progressive individualisation of collective spaces, it was noted that paternalism and *public health paternalism* could be and should be differentiated and the latter promoted, which would be completely in line with the 'broader public good' clause of the International Covenant on Civil and Political Rights, to be discussed presently (Beauchamp 2003).

The concept of merit goods is inevitably linked with the concept of human rights and the existence of a social contract (Dasgupta 1993). Health has been an important focal point in the Universal Declaration of Human Rights, which proclaimed in 1948;

[17] Moreover, one fails to understand why any such 'escape clause' should be a problem if it is socially sensible.

> Everyone has a right to a standard of living adequate for the health and well-being of him[her]self and his [her] family, including food, clothing, housing, and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age, or other lack of livelihood in circumstances beyond his[her] control (cited in Farmer 1999: 1486).

The values that underlie the practice of public health in accordance with the principles of Primary Health Care approach are necessarily the values of human rights. Although health is an essential element in improving people's lives, health when isolated from social, political, and economic developments and social justice, cannot improve the human condition. This is where the need of a human rights framework comes in; it places health issues in the broader public concern and helps to keep them there (Rodriguez-Garcia and Akhter 2000). It has been noted that social and economic rights must also be upheld, as they are as critical as, and complementary to, health rights in the promotion of human rights (Farmer 1999).

Towards the end of the chapter, it would be apposite to mention the alleged contradictions between public health and human rights. It has been argued that since the very concept of rights is based on individualistic values, it is, by definition, incompatible with anything that has a collective nature. But such a criticism could only be seen as a deliberate effort to exaggerate the differences since it is clearly explained in the International Covenant on Civil and Political Rights that there can be situations when 'it is considered legitimate to limit certain individual rights to achieve a broader public good' (Bankowski et al 1997: 47). Lately, an interface of cooperation has been materialising, with focus on equity and the goals set by the Alma Ata declaration, which are long overdue. It has been contended quite convincingly that in spite of the foundations being different, human rights and public health approaches could be complementary in that both strive towards addressing and advancing human

well-being (Mann et al 1999). This alliance is one area where active academic debate is going on around the globe, and it was noted that 'rather than perceiving a conflict between public health and human rights, a synergy is emerging'(Bankowski et al 1997: 10).

The above discussion examined why Primary Health Care, which includes preventive, curative and rehabilitative care should be seen as a merit good and comprehensive state provision of Primary Health Care should be a policy priority. From past experience, we have seen that historical reductions in mortality were not primarily the results of economic growth; but forceful government intervention. Also, we have seen that although there may be an economic case for governmental action in social sectors, the motives for interventions should not only be economic but ideally ethical, as the citizens have intrinsic rights to a certain level of living irrespective of his/her economic worth. In the next chapter, we would be discussing the methods of economic evaluations in health, along with a short history of their evolution.

CHAPTER II

ECONOMIC EVALUATION IN HEALTH

The last quarter of the twentieth century marked a global shift from comprehensive care to an exceedingly selective health care that was in turn, in perfect accordance with the changing international economic order. This phase, when the State had begun to be seen as a mere facilitator to the enhanced participation of market rather than an active player in the area of health, was inevitably a phase of looming *cost-consciousness* in relation to planning and policymaking. This was also the period when the Washington Consensus- "the neo-liberal counterpart for developing economies to the Reaganism and Thatcherism that had been prescribed for developed economies - an ideology of reliance upon market forces and the reduction of state intervention and expenditure to a minimum", gained significant popularity within development thinking (Fine 2002: 2).

Normative economics, according to the Handbook of Health Economics, is "precisely about attempting to rank, from better to worse from an economic perspective, resource allocations and the policies that generate them" (Hurley 2000: 57). Accordingly, priority-setting mechanisms like methods of economic evaluation become indispensable for any research that has direct or indirect policy significance, in areas including health. Economic evaluation is defined as "a comparative analysis of alternative courses of action in terms of both their costs and consequences" (Drummond et al 1998). The objective of the use of economic evaluation methods in health is to choose those interventions which would help attain greatest *quantifiable* benefits, which directly or indirectly amount to economic benefits, per unit cost.

All methods of economic evaluation in health have their roots in either of the two normative foundational frameworks of economics. Cost- Benefit Analysis is

based on neo-classical welfare theory (welfarism) and Cost- Effectiveness Analysis is based on extra-welfarism. There are other techniques of economic evaluation as well, but those are adapted versions of the aforementioned methods (Hurley 2000). The inadequacies of welfarism to deal with decision-making in health (in particular) as perceived from the experience with Cost- Benefit Analysis, was the main impetus for the development of an alternative framework and the subsequent evolution of a new set of techniques of evaluation. Nevertheless, apart from some foundational differences, the internal logic of the new methods of evaluation remained that of the cost benefit approach.[1]

Influential papers applying evaluation techniques to allocative problems in health started appearing in medical journals by the end of the nineteen seventies (Neumann 2005). All the initial efforts of economic evaluations in health were embedded on welfare economic theory or welfarism. Welfarism proposes that the acceptability of any redistribution of resources, or any governmental intervention for that matter, should be valued exclusively on the basis of the resulting changes in utility levels of individuals. It also maintains that individuals make self-interested, rational choices that are purely utilitarian in nature. In effect, the individuals are seen to be the best judges of what is good for them (Sen 1977). In addition, the Paretian roots of Welfarism uphold that if one person can be made better off without anybody else being worse off, there would be global improvement in welfare.

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[1] For Example, CEA has been represented as ""a truncated form of cost-benefit analysis (that) draws guidance only from the cost side-or alternatively, only from the benefit side-of a cost-benefit format." (Mishan (1994) quoted in Jack, William (1999), *Principles of Health Economics for Developing Countries*, WBI Development Studies, The World Bank, Washington, D. C.)

There has been general dissatisfaction among economists, with respect to the welfare theory's inability in attributing any non-utility characteristics to health. The emergence of a vast body of literature dealing with innovative ideas and approaches functioned as the basis of an alternative framework, extra-welfarism (Brouwer and Koopmanschap 2000). Even while pursuing the same objective of maximising health benefits from limited resources, the focus on individual utility-based welfare gets somewhat broader. The efforts in developing and promoting this alternative framework as well as evolving new approaches in its application to health are fundamentally associated with Amartya Sen and Anthony Culyer, among others (McPake et al 2002).

In the extra-welfarist approach, health is the outcome that is to be maximised, instead of utility. In addition, instead of the notion of 'demand' for health in the welfarist approach, it accommodates, albeit notionally, the possibility of there being a theoretically permissible 'need' for health. It has nonetheless been observed that in spite of the differences, these two frameworks necessarily overlap and accordingly, share some important features the limitations to which would be examined in the next chapter (Hurley 1998). The history of cost-benefit analysis has been a controversial one mainly because of its predominant role in decision-making and it would be appropriate to note here that the history of economic evaluations in general would necessarily be a history of unresolved debates. This chapter would present a summary history of the application of the methods of economic evaluation which are broadly variants of the cost-benefit approach with particular reference to health, and then move on to briefly describe these methods.

A Short History of Economic Evaluations in Health

Application of anything resembling an economic evaluation informing policy is believed to have begun with the attempt of Richard Petty, who, in the eighteenth century, argued that social investment should be promoted in medicine as the value of a saved human life outweighs the cost of treatment. The recommendation for comparison of costs and benefits of water-related projects as early as 1808 by the US Secretary of the Treasury, Albert Gallatin, and the appeal for sanitary reforms in Boston by Lemuel Shattuck in mid nineteenth century are taken to be efforts along similar lines (Keeler and Cretin 1987 and Neumann 2005).

However, the most visible example of a cost/benefit- centric rationalisation of social interventions from public health history remains the Great Sanitary Revolution of Britain, propelled not insignificantly, by the utilitarian 'poor law bureaucrat', Edwin Chadwick. According to Chadwickian logic, public health measures were a means of reducing the costs of public relief, for prevention was found to work out cheaper. It was the pressure to cut costs that motivated the Great Sanitary Awakening, which shifted the focus to the causes of disease: more precisely, to the 'acute infectious diseases that were fatal to *male* breadwinners' (Hamlin and Sheard 1998).

The analytical foundations of the discipline of cost- benefit analysis, the foremost among priority setting tools, dates back to the publication of a paper, "On the Measurement of the Utility of Public Works" by Jules Dupuit in 1844. Initially, cost-benefit analysis was promoted, and used, widely by the army establishment[2],

[2] For example, from the 1920s many have considered the US Army Corps of Engineers to be the 'political godfather' of Cost-Benefit Analysis in the United States. Also, manipulations on the benefit front so as to make certain projects more acceptable, have been prevalent and been investigated upon. (See Persky (2001)).

before it gained popularity among decision makers of all areas of public expenditure. Dupuit's ideas were revived and used by the US government through the US Flood Control Act of 1936, which in turn encouraged work in both the theory and application of cost-benefit analysis (Sassone 1994). The New Deal government headed by Franklin D. Roosevelt initiated the formal use of Cost Benefit Analysis in policy circles to help advance economic recovery and social welfare (Adler and Posner 1999). The New Deal package constituted government initiatives to aid sufferers of the Depression, to guarantee minimal standards of living and to offer financial security for citizens through employment generation, which were unprecedented in history. This period is seen by many as the initial stages in the evolution of a quasi-welfare state in the United States. From the nineteen fifties, Cost Benefit Analysis had been an essential tool of various planning regimes across the world.

The intellectual groundwork of economic evaluations, as they are used today, was laid with various works by Eckstein, Arrow, Raiffa, Mirrlees, Sen, Marglin and Dasgupta, among others (Neumann 2005). The practice of social cost- benefit analysis has a distinguished history as part of various planning regimes across the world. It had been noted that any planning procedure should take into account the requisite inter-industry linkages while devising a coherent macroeconomic policy framework. Therefore, as a part of the planning procedure, the tool of social cost-benefit analysis had proven to be quite useful as 'it avoid(ed) wasteful use of resources at the micro level along with preventing the emergence of additional distortions in the process of income generation if suitable distributional weights are allowed for' (Chakravarty 1988: 690).

The marked differences between a social cost-benefit analysis and a private cost-benefit analysis have to be looked at. Since a social cost benefit analysis is conducted ideally by the government, the only consequences of concern need not be profitability; since a wider range of impacts are to be taken into consideration(Stiglitz 2000). The analysis is carried out from the planner's point of view, whose preferences over states of economy are embodied in well- defined *social welfare functions* (Dreze 1987). Social welfare functions are central to evaluation exercises as they represent the political as well as distributional choices that the planner makes. Whereas the private CBA uses market prices to evaluate costs and outcomes, a public planner might not use market prices in two instances; first when a market for outputs and inputs does not exist and second, when in a case of market failure where the market prices do not represent a project's true marginal social costs or benefits (Stiglitz 2000).

In such circumstances, economists try to calculate the true marginal social costs and benefits by imputing *shadow prices*. Shadow price is defined as the 'total impact on social welfare of a unit increase in the net supply of that commodity from the public sector' (Dreze 1987: 910) A shadow price is also referred to as the dual value of the constrained maximization exercise. In other words, the shadow price is the true economic price (to the society) of devoting resources to a particular activity vis-à-vis the next best alternative. In a functioning market, the price of something is equal to its opportunity cost; but when there are market imperfections, the market price may exceed the opportunity cost. In the case of labour, in an economy where there is massive involuntary unemployment, the shadow price of labour must be much lesser than the market wage. Like labour, every factor has a shadow price, a price that

reflects its true marginal social cost (Stiglitz 2000). In the case of health sector, it was noted by Mead;

> As is well known, financial costs do not always accurately reflect the true economic costs to society of devoting resources to a particular activity in lieu of the next best alternative; consequently decisions made on the basis of financial costs may result in the misallocation of resources. The principal areas in which financial and economic costs differ-in health as in most other sectors-are (1) the value assigned to foreign exchange and (2) wages and salaries. Observed foreign exchange rates often underestimate the true scarcity value of foreign exchange in developing countries, while observed wage rates frequently overestimate the true opportunity cost of labour. The use of shadow prices (shadow foreign exchange rates and shadow wages) corrects for these distortions, raising the cost of foreign exchange and reducing the cost of labour. This means that projects requiring large amounts of foreign exchange will tend to be by-passed in favour of those that are labour intensive.
>
> (Mead 1991: 30)

On the global development front, it was the World Bank which was one of the principal promoters of the idea of economic evaluation of projects, particularly vis-à-vis the development programmes of the Third World. From the mid-sixties, the Bank has published extensively on project evaluation studies, dealing mainly with methods and techniques of Cost-Benefit Analysis, as well as financed such studies (Ray 1990). Interestingly, it was noted by Little and Mirrlees that the World Bank had hardly ever used distributional weights in practice, in spite of publishing guidelines for their use (Somanathan 2006). After the seventies, the role of the World Bank in global health has been progressively rising and its lending for social services like health, nutrition, education, and social security has increased from 5% of the budget in 1980 to 22% in 2003. This in turn meant that, given the extremely influential role of the Bank,

economic efficiency became a major, and sometimes the sole criterion for investments in health. The notion of selectivity[3] in health has been encouraged, taking into account institutional, economic, and more often than not, *political* costs, benefits and risks (Ruger 2005).

Quantification of both positive and negative effects of any possible state intervention and the comparison of the two, seeking possibilities of potential compensation has been the foundation of the advances in Cost- Benefit Analysis from the beginning. Economic theorists of diverse affinities have questioned almost all these efforts, on various grounds, but economic evaluations progressively gained popularity among the academic as well as policy circles all through the fifties and the sixties, partly as a result of there being 'political godfathers' to the discipline(Adler and Posner 1999). This augmented popularity of Cost- Benefit Analysis, not without reason, had been gained in tandem with a systematic mathematization of mainstream economic theory (Debreu 1991).

Despite the popularity with development policy planners, its expected entry into health policy circles was delayed for practical as well as ideological reasons. The seventies was seen as a period of optimism in the Third World health sector due to the outcome of the Vietnam war, acceptance of China as a global power by the West and its consequent entry to the World Health Organisation, among other factors. This had meant that alternative models of health care that were comprehensive and egalitarian in nature, and were already in place in China, Cuba and many Latin American countries could no longer be ignored (Rao 2000).

[3] For a discussion, see Cueto, Marcos (2004) The Origins of Primary Health Care and Selective Primary Health Care, *American Journal of Public Health*, Vol. 94, No. 11, pp. 1864-74.

However, the debt crisis of the eighties, a period known as the 'lost decade' because of the stagnation in the progress of social indicators in the Third World, was utilised by the IMF and the World Bank to intervene in the health sector of these countries and to shape their future direction. This was done through conditionalities tied to aids, loans and debt relief, and also, through direct involvement in the practice of governance. Health Sector Reforms, part of a package of structural adjustment measures which were introduced to the Third World from the eighties, put fiscal limits to public health expenditure (Global Health Watch 2005). During the same period, the ideal of Comprehensive Primary Health Care, put forth by the Alma Ata Declaration was largely supplanted by the Selective Primary Health Care Approach, which could be seen as the precursor of explicit priority setting in health.

Although Selective Primary Health Care as a concept was in existence from the end seventies, it was not given legitimacy until in 1983 when UNICEF announced a primary health care initiative termed as 'GOBI', and subsequently, in response to criticisms that GOBI was too selective and narrow, expanded it to 'GOBI-FFF' concentrating on pregnant women and children. The World Health Organisation and bilateral donors like USAID had actively endorsed this approach (Global Health Watch 2005). The prioritised health interventions proposed under the acronym GOBI-FFF were the following:

- **G**rowth monitoring;
- **O**ral Rehydration Therapy;
- **B**reastfeeding;
- **I**mmunization;
- **F**amily Planning;
- **F**ood Supplements; and

- Female Education (Werner and Sanders 1997 and Banerji 1984).

Even though the concept was made marginally broader, in practice it was being scaled down and narrowed down further and the whole programme of GOBI-FFF was, in many countries, limited to Oral Rehydration Therapy and immunization (Cueto 2004). In point of fact, the focus of UNICEF itself, under the influence of the strong biomedical lobby within the organization, began to shift towards Oral Rehydration Therapy and immunization imparting to them the most important roles in the Child Survival Revolution that was said to have started, calling them together the 'twin engines' of the so-called revolution. However, it so happened that many countries chose to put most of their funds into one of these 'engines' while overlooking the other, thus undermining even what remained of the broader concept(Werner and Sanders 1997).

The unmistakable language of cost containment marked UNICEF's arguments justifying GOBI-FFF. The first argument was about the financial constraints that are faced by Third World countries in the face of the economic crisis of the eighties. It followed that poor countries could not *afford* comprehensive interventions. Secondly, it was argued that *low-cost* technologies that are widely accessible exist which could be used to bring down child mortality. Lastly, it was emphasized that popularizing these technologies at low cost was possible through a process termed as 'social marketing' and thus, implementation of GOBI-FFF has to be a high priority (Wisner 1988 in ibid.).

The rise of the World Bank as the agency determining the global health agenda and a subsequent legitimacy to selectivity in health care led to the emergence of Cost- Benefit Analysis and its variants in both national and international

policymaking circles in health. Nevertheless, this was not a result of the largely theoretical or practical objections having been overcome, but on the contrary, the changed political climate of the new uni-polar world had made any theoretical defence clearly unnecessary. Interestingly, it has even been put forth that the academic reputation of economic evaluations and their popularity among decision-making agencies were often starkly divergent in nature. In other words, academic criticisms have often had little or no impact on government practice, and in fact, *other* factors accounted for the degree of popularity it enjoyed among decision makers. [4]

The academic dissent to the welfare economic framework, particularly to the constrained and exclusive focus on utility-based measurements of welfare, helped the emergence of extra-welfarist approach as discussed already. According to Hurley, "the health sector has been particularly receptive to extra-welfarist ideas, in part because of features of the health care markets that render questionable certain elements of the welfare economic framework and because the role of health care in health production function provides greater scope for third-party judgements of welfare than is the case for many goods" (Hurley 1998: 375). Cost- Effectiveness Analysis as well as Cost- Utility Analysis which is a variant of the former, have been lately growing in popularity among health researchers and there has been a steady increase in the number of studies in recent years (Hauck et al 2004 and Neumann 2005).

Since it is an evolving area with many unresolved issues, any effort at standardisation is bound to have its own limitations. It has been pointed out that, since

[4] This is not entirely surprising since orthodox economic theory itself is seen by many as "an ideological defence of capitalism" (Marglin, SA (1973), *The Economic Journal*, Vol.83, No. 330, pp.535-538.

researchers often disregard such standardisation, there is a possibility of uncertainty in the use of terminology- some technical terms may be used as interchangeable when actually they are not. The prevalent confusion between Cost- Effectiveness Analysis and Cost- Utility Analysis is a case in point.[5] Conforming to the more accepted practice, in this chapter, we would be considering the various methods of economic evaluation in health as a spectrum, with Cost- Benefit Analysis at one extreme, where monetary benefits are calculated, to Cost- Effectiveness Analysis, where outcomes would be defined in natural units (McPake et al 2002).

The late nineteen nineties could be considered as a marker as far as the overt use of economic evaluation tools by the World Health Organization to inform policy decisions is concerned. With particular focus on low and middle income countries, WHO launched an project called WHO-CHOICE (**Cho**osing **I**nterventions that are **C**ost **E**ffective). Started in 1998, this initiative was meant to assist decision makers in the developing world 'with evidence for priority setting to help improve the performance of health systems' (Neumann 2005). The main function of this initiative was the development of standardised methods for economic evaluation which could be applied to the whole spectrum of interventions. Using these methods, a '*menu of interventions*' is to be given to each country featuring a list consisting of cost-effective interventions , non-cost-effective interventions and a third set that are moderately cost-(in)effective (Neumann 2005).

[5] What British health economists would term as cost-effectiveness analysis is often described as cost-utility analysis on the other side of the Atlantic.

Basic Types of Economic Evaluation in Health: An Outline

Cost- Benefit Analysis (CBA)

In Cost-Benefit Analysis, costs as well as benefits are expressed in money terms, and theoretically, it allows for different types of health services to be compared. Reduction of everything into currency units makes it remarkably easy for the economist to compare health projects even with projects external to the health sector, and thus presents an easy solution to the question of resource allocation between health and other sectors. The different categories of costs and benefits pertinent to an economic evaluation exercise could be detailed as shown in the following table.

Table 1: Types of costs and benefits relevant to the economic evaluation of projects/programmes.

Costs	
1. Organizing and operating costs within the health care sector (e.g. health care professionals' time, supplies, equipment, power and capital costs)	} direct costs
2. Costs borne by patients and their families:	
• out-of-pocket expenses	} direct costs
• patient and family inputs into treatment	
• time lost from work	} indirect costs
• psychic costs	
3. Costs borne externally to the health care sector, patients and their families	
Consequences/ Benefits	
1. Changes in physical, social or emotional functioning (*effects*)	
2. Changes in resources use (*benefits*) for organizing and operating services within the health care sector:	
- for the original condition	} direct benefits
- for unrelated conditions	
relating to activities of patients and their families:	
-savings in expenditure or leisure time benefits	} direct benefits
- savings in lost work time benefits	} indirect benefits
3. Changes in the quality of life of patients and their families (*utility*)	

(Mills and Gilson 1988: 66-7)

According to a standard text book of the methods of economic evaluation in health care, cost –benefit analysis "compares the discounted future streams of incremental programme benefits with incremental programme costs; the difference between these two being the net social benefit of the programme" (Drummond et al 1998: 205). Putting it differently, the objective of the exercise is to find out whether a programme's benefits surpass its costs as seen in the following Box. Thus, if there is a positive net social benefit, the programme is deemed worthwhile. Since it deals with allocative efficiency, CBA is considered broader in scope than other methods of evaluation (Drummond et al 1998).

Box 1: The basic formulation of Cost-Benefit Analysis

Given i = 1,... l possible investments:

$$NSB_i \equiv \sum_{t=1}^{n} \frac{b_i(t) - c_i(t)}{(i+r)^{t-1}}$$

NSB_i	= net social benefit of project i (discounted)
$b_i(t)$	= benefits (in money terms) derived in year t
$c_i(t)$	= costs (in money terms) in year t
$1/(i+r)^{t-1}$	= discount factor at annual interest rate r
n	= lifetime of project

The primary goal of cost-benefit analysis in health is to identify projects where NSB is greater than zero. It will also be useful, for allocation within a fixed budget, to rank projects according to their NSB and prioritise resource allocation.

(Drummond et al 1998:206)

The assessment of health benefits from a potential health intervention is calculated in Cost-Benefit Analysis by using one of the two approaches- the human capital approach or the willingness-to-pay approach.

1. The Human Capital Approach

The utilization of a health programme is viewed in this approach as an investment made in the human capital of the individual concerned (Drummond et al 1998). The human capital approach fundamentally links up any health benefit to a corresponding labour productivity increase; in other words, the human capital approach assigns only an instrumental relevance for improvements in health status- just so long as it enhances the productivity of the labour force (Jack 1999).

These potential productivity gains are in turn converted to money values, and strictly speaking, the benefit of saving someone from a life-threatening illness is his/her future productive output in the market (Jack 1999). To put it differently, the value of morbidity, or health forgone, was calculated as the lost income of the individuals concerned (Neumann 2005). The concept of human capital could be used for two purposes in evaluations; first, as the *singular* basis for measuring all aspects of health improvements and second, as a method of measuring only a *component* of the benefits of health interventions, in terms of the productivity gains(Drummond et al 1998).

2. The Willingness-to-Pay Approach

Economic evaluation studies using the willingness-to-pay approach are also called contingent valuation studies. The willingness to pay approach takes society as an aggregate of individuals who are perfect judges of their own welfare, and therefore, puts forth that their monetary valuation of any potential health improvement should be the ideal one. Contingent valuation studies use survey methods that require them to 'think about the *contingency* of an actual market existing for a programme or health benefit and to reveal the maximum that they would be willing to pay for such a programme or benefit'. By aggregating all these stated money values which may be

positive or negative, the planner reaches the society's consumer surplus- which is the basis of the cost-benefit calculus (Drummond 1998: 213-4).

This approach implicitly rules out the possibility of the existence of information asymmetries in the market. Also, it assumes that initial monetary entitlements have nothing to do with one's valuation (Neumann 2005). In this method, questionnaires could also be alternatively used to elicit consumer's valuation of health in terms of their 'willingness to accept' ill health. One advantage of willingness to pay approach over other methods is that it could capture effects of externalities in the analysis, that is, the effects of a programme on an individual that may spill over to other persons (Drummond 1998).

After benefits are assessed in money terms, the net benefits are arrived at by subtracting costs of the intervention from the benefits, and decisions regarding the ranking of alternative policy interventions are arrived at. Here, after discounting[6] for the future costs (and occasionally benefits), the alternative that has the highest net benefit is chosen to be the first priority (Hauck et al 2004). For example, we could take an imaginary society with two groups G1 and G2 and a question of choice between two interventions A and B, former principally benefiting G1 and the latter, benefiting G2. Now, if members of G1 were willing to pay more for intervention A than what it would take to compensate G2 for the forgone intervention B, intervention A would be termed to be more efficient and thus, more acceptable. Nonetheless, in view of the problems in measurement, it has been observed, "the difficulty of

[6] For a discussion on discounting, see Cairns, John (2001), Discounting in Economic Evaluation, in Drummond, M and McGuire, A (ed.) *Economic Evaluation in Health Care: Merging Theory with Practice*, Oxford University Press, New York.

measuring benefits often reduces cost-benefit analysis to cost-minimization exercises in sectors such as health."(Ray 1990).

Cost- Effectiveness Analysis (CEA)

Based on the extra-welfarist framework, Cost- Effectiveness Analysis offers a more practical approach to evaluation of health programmes. Cost Effectiveness Analysis bypasses many of the criticisms of its forerunner by not using monetary measures of benefits. The centre of analysis in this method is the incremental cost/effectiveness ratio (C/E ratio) which makes comparisons between alternative courses of action feasible. The cost/effectiveness ratio is "the difference in costs between the two interventions divided by the difference in their effects, and can be interpreted as the incremental price of a unit health effect from the intervention under study, compared to the other." (Hauck et al 2004)

Measurement of Health Benefits

In Cost- Effectiveness Analysis, two general methods are used in order to calculate health benefits: first, assessment as natural units and second, using summary measures dealing with mortality as well as morbidity. Assessments in natural units are possible only when the interventions being compared have the same goal. This limitation was sought to be overcome by the introduction of various summary health measures like Quality- Adjusted Life Years (QALY), Disability-Adjusted Life Years (DALY) and Healthy-Years Equivalents (HYE).[7] Summary health measures were

[7] For a useful discussion of the future direction of the research on this front, see Dolan, Paul (2000), The Measurement of Health-related Quality of Life for Use in Resource Allocation Decisions in Health Care, in Culyer, A. J, and Newhouse, J.P (ed.) *Handbook of Health Economics*, Volume 1A, Elsevier, pp. 1723- 1760.

developed to compare interventions whose effects on health are qualitatively different, and the most widely used measure in Cost-Effectiveness studies is the QALY.

Unlike Cost-Benefit Analysis, Cost-Effectiveness Analysis does not take into account social benefits- which are necessarily utility-based, since it considers improvements in health as the principal benefit. The numerator of the cost/effectiveness ratio, may either be the total cost (C1+C2), net health care cost (C1-B1) or net economic cost to society (C1+C2-B1-B2)[8]. The denominator of the ratio would be the indicator of the most relevant health consequence of the programme concerned. CEA is found to be useful in comparing alternative programmes that offer the same health consequences. (Torrance 1986). The interventions that have a lower C/E ratio are given to be superior to the alternative interventions, and the acceptable values of C/E ratio are arrived at subjectively, in line with the value that society places on health.

Cost-Effectiveness Analysis in its pure form assesses health benefits only in natural units and thus, the analysis that uses summary health measures like QALY is referred to as Cost-Utility Analysis, since these measures which are in fact indices of benefit, could be, according to some theorists, construed as measures of utility (Hauck et al 2004). As Drummond et al (1998) put it, while 'outcomes in CEA are single, programme-specific, and unvalued... outcomes in CUA may be single or multiple, are general as opposed to programme-specific, and incorporate the notion of value' (Drummond et al 1998: 139).

[8] C1= Direct Costs, C2= Indirect Costs (Production Losses to Society), B1= Direct Benefits and B2 = Indirect Benefits (Production Gains to Society).

The application of various methods of economic evaluation in health is an area where active academic research is going on, and is also a fiercely contested terrain of many unresolved issues, be they methodological, philosophical or practical. In the next chapter, the utilitarian foundations of economic evaluation would be examined. The inherent methodological, practical as well as ethical issues in various methods of economic evaluation, which make calculations as well as conclusions based on these highly problematic, would also be discussed.

CHAPTER III

ECONOMIC EVALUATION AS APPLYING UTILITARIANISM TO HEALTH: A CRITICAL APPRAISAL

The philosophical foundations of public health and that of economics have shared some common ground from the initial years of development of the respective disciplines. Historical evolution of public health as a *separate* branch of knowledge clearly shows that from the initial days of practice, the motives for interventions were broadly utilitarian in nature. Apart from that, it has also been observed: " (many) public health practitioners take it for granted that, since their role is to work on behalf of populations to produce maximum health gain, utilitarian principles provide the fundamental ethical framework to guide their decisions" (Richman 2003: 7). Mainstream economics, on the other hand, has for long been purely utilitarian, and continues to be greatly influenced by the ideology, if not in *pure* theory, certainly in practice and in the kind of debates it throws up which have serious policy implications.

Moreover, in present times, the link that connects health and economics is necessarily a utilitarian one, as evident from the famous report of the Commission on Macroeconomics and Health, widely heralded as inspiring and groundbreaking (Katz 2004). The focus of the report is the *profitability* of investments in health, much in line with the *1993 World Development Report.* Health is thus seen as a means to achieve economic ends that are largely utilitarian in nature, while root causes of both poor health and poverty are ignored (Katz 2004). In the current chapter, we would be critically looking at utilitarianism as a philosophical parent of numerous disciplines and by virtue of it, as a basis for public policy. We would also be examining the logic of economic evaluation in health which may alternatively be termed as *utilitarianism*

applied to health, and orthodox economic theory, which provides the analytical basis for these methods.

An Outline of the Theory of Utilitarian Social Ethics

Utilitarianism, which assesses acceptability or unacceptability of alternative situations only in terms of pleasure and pain derived, is taken to be the paradigm example for consequentialism.[1] Utilitarianism takes the societal welfare at any point of time to be the sum total of individual pleasure minus pain, amounting to hedonistic consequentialism, despite the high sophistication it acquired over history.[2] The utilitarian framework offers one way of assessing the relative importance of different states of affairs. According to Sen, "..given the influence of this tradition in normative economics[3] (through the works of such writers as Bentham, Mill, Jevons, Sidgwick, Edgeworth, Marshall and Pigou), it is not surprising that it is very often taken for granted that any evaluative concept in economics must be ultimately based on some notion or other of utility" (Sen 1985: 8).

Historically, policy sciences have had an affinity to the utilitarian philosophy even as it emerged as an alternative to another school of ethical thought, the

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[1] Consequentialism in moral philosophy is represented by the belief that acts and practices are to be assessed only in term of the value of the consequences.

[2] Another variety, which tries to broaden the concept by incorporating other values into the analysis, namely pluralistic consequentialism does not go well with the mainstream utilitarians at all. Complexity, according to them, leads to inconsistency with the rational choice framework.

> *We live in a world that is becoming increasingly complex. Unfortunately our styles of thinking rarely match this complexity. We often end up persuading ourselves that everything is more simple than it actually is, dealing with complexity by presuming that it does not really exist.* (Morgan, 1986, p16.)

Quoted in Soderbaum, Peter(2005), Ecological Economics, Earthscan Publications Limited, London. P.12.). For a discussion on hedonistic versus pluralistic consequentialism, see Utilitarianism and Beyond (1988).

[3] Normative Economics 'is the branch of economics that incorporates value judgments about what particular policy actions should be recommended to achieve a desirable goal' (Williams and Bryan 2006).

deontological approach, named after the Greek word for Duty, *deon*, which is concerned with the intrinsic rights of the people. This school of thought dealt more with moral obligations and privileges rather than the maximization of benefits (Bankowski et al 1997). Deontologists lost out in the long run since much of the appeal that utilitarianism had in policy sciences was because of the ease in which moral judgements could be made with the framework.

Utilitarianism is the moral doctrine which *identifies* the ethically good with what promotes general utility/happiness to the greatest number in the society. Although it may look benevolent in principle, its tendency to subsume the majority of other moral doctrines "under the umbrella concept of happiness" by offering an apparently straightforward and simple objective base on which policy judgements could effortlessly be made, calls for a detailed analysis (Bevir 2002). In this section, the basic tenets of utilitarianism would be illustrated as well as the extent to which Public health and Economics are informed, as separate disciplines, by this philosophical doctrine. Then a summary critique of utilitarianism would be presented, with particular emphasis on its claim to be an objective base for social policy.

.For descriptive purposes, utilitarianism could be subdivided into three components namely, Consequentialism, Sum Ranking and Welfarism.[4]

I. Consequentialism

Consequentialism stands for the claim that all choices, be they actions, rules or institutions, must be judged by the results they generate. According to Sen, "..in judging an action there is no intrinsic interest at all in the non-utility characteristics

[4] In this section, we would be more or less following the Sennian scheme (presented in Sen (2000), Sen and Williams (1988), Sen (1979a, 1979b) and Sen (1990)) mainly due to the simplicity and clarity it offers.

either of those who take the action, or those who are affected by it. In judging the action there is no need to know who is doing what to whom so long as the impact of these actions- direct and indirect- on the impersonal sum of utilities is known" (Sen and Williams 1998: 5). In other words, the evaluation of a decision has to be solely dependent on the nature of the resulting state of affairs.

In a consequentialist understanding, action is viewed to be having only an instrumental importance as the emphasis is always upon outcomes rather than processes (Mannion and Small 1999). Conventionally, in the existing literature regarding utilitarianism, there is a tendency of mistakenly seeing consequentialism and welfarism together as a single constituent. Nevertheless, these are separate elements and more importantly, a broadened version of consequentialism is said to be compatible with a right-based moral theory, unlike the other constituents of utilitarianism, namely, welfarism and sum-ranking. It has been observed, "It is, of course, true that consequential reasoning appeals to the economists' standard way of looking at prescriptive evaluation, and this can be, and has indeed often been, used rather mechanically. However, if consequential reasoning is used without the additional limitations imposed by the quite different requirements of welfarism, position independence, and the overlooking of possible intrinsic value of instrumentally important variables, then the consequential approach can provide a sensitive as well as a robust structure for prescriptive thinking on such matters as rights and freedom" (Sen 1990: 77-8).

II. Sum Ranking

The second component of utilitarianism is sum ranking, the principle that the appropriate method of aggregation of social welfare is the addition of individual

utilities, expressed necessarily in numbers. Sum ranking is, in fact, a prerequisite for welfarism which then calculates the relative significance of alternative states of affairs by comparing these aggregate numbers, sets which purportedly represent the different levels of well-being of the society (Sen 1979b: 468). In combining the individual utilities together as a total sum, both identity and separateness of the individuals are inevitably lost. In short, "the utility sum is to be maximised irrespective of the inequality in the distribution of utilities" (Sen 2000: 59). The distributional attributes are got rid off and all these in turn causes a substantial neglect of useful information, like that on autonomy, power, culture or indeed history. However, these aspects are purportedly more than compensated for by the simplicity and trimness of analysis the framework offers.

III. Welfarism or Utility Base

Welfarism, the third and last component, is arguably the most important one as far as the implications to health studies are concerned. It is the proposition that the acceptability of any situation should be evaluated exclusively on the basis of the utility levels achieved by the concerned individuals when compared to other situations. It presupposes a clear-cut positive relation between the relative goodness of alternative states of affairs and the respective collections of individual utilities in these states (Sen 1979b: 468). In the process, the possibility of use or even relevance of all non-utility attributes of the situation are ruled out such as the fulfilment or violation of rights, duties etc. Welfarism assumes that "the capacity to evaluate alternatives—the decision-making function—lies within individuals, and that individual well-being is the source of the welfare function upon which decisions are made" (Forget 2004: 629).

These three components together constitute the standard utilitarian framework; the basic structure of which could be illustrated as follows: any action is judged by the consequent state of affairs *–consequentialism–* the consequent state of affairs is judged by utilities in that state *–welfarism–* and the respective utilities of the state are calculated by aggregating the individual utilities *–sum-ranking* (Sen 2000: 59).

Utilitarianism in Economics

Positivism, greatly influenced by Comte and Mill, adopted Newtonian physics as a model and tried to reduce social facts to laws and synthesize the whole of human understanding. Being scientific and therefore value free, the logical system put forward by the proponents of this philosophy attempted a causal explanation of human actions and reactions much akin to the natural sciences. According to Hollis, 'positivism embraces any approach that applies scientific method to human affairs conceived as belonging to a natural order open to objective enquiry' (Hollis: 1994). Positivists are necessarily empiricists who reject the possibility of there being any unobservable forces, processes or instincts. Even though the influence of positivism upon philosophy and political science declined significantly in the second half of the 20th century owing largely to its obsession with exclusive (and tedious) empirical analysis, it remained a potent force in economics, in the policy science if not pure theory, ironically for the very same reasons.

Utilitarianism, a universalised moral system based on an exceedingly individualistic idea of human nature could be seen as the *economic equivalent* to positivism. In fact, it was even observed, "in economics, the triumph of Positivism was the triumph of utility" (Hollis and Nell 1975). According to utilitarians, every human being is an 'individual bundle of desires', who single-mindedly seek the

fulfilment of his/her (predominantly *his*[5]) desire through the maximization of utility. The mechanistic/scientific view of phenomena that the positivists brought into economic theory fitted well with the 'value-free calculus of utility' enabling the practitioners to apply the newfound scientific techniques to the economic behaviour of individuals(Hollis and Nell 1975). The emergence of utilitarianism in the later part of the eighteenth century was more or less as a 'scientific alternative' to the natural rights theories that dominated until then. Moreover, a mechanical understanding of the world, the hallmark of the positivist causal model where the *closed* chain of causation triggering the phenomena always stops at the directly preceding link, is attributed to the need of capitalism to perpetuate social domination and exploitation (Gould 1983).

The perceived positivist divide between knowledge and politics has been criticised from the ecological as well as the feminist perspectives. Soderbaum (2005), has proposed in an ecological critique that unless there is a consensus in the society about the allocative issues, the ability of the neo-classical approach to offer 'solutions' to problems becomes redundant. In a situation of a democratic society with diverse opinions and ideologies, it would be better to explain issues to various actors and interested parties rather than trying to 'solve' it behind veils. Various studies in ecological economics have suggested constructs like *homo politicus*, *homo sustinens* or even *political economic person* as an alternative for the proverbial homo economicus of neo-classical economics (Faber et al 2002).

[5] For a discussion on the Feminist Critique to Mainstream economic theory, see Woolley, F.R, (1993), The Feminist Challenge to Neoclassical Economics, Cambridge Journal of Economics, Vol.17, pp. 485-500.

The neoclassical research project was also criticised for its underlying androcentricness that is universal in its theories. The recognition that economies are not populated by explicitly individualistic subjects, but rather by historically located humans with some degree of collectiveness is a part of most feminist approaches. However, the initial feminist critiques of neoclassical economics tried to find a solution to the bias by integrating women into both the economic discipline and its theories. These efforts were nonetheless criticised as mere "add women and stir" strategies, largely because of their failure to challenge the existing neoclassical framework (Hewitson 2001) [6]. The latter critiques have been more nuanced in nature, focusing on masculinist prejudices of the central assumptions of neoclassical economics, especially that of the theory of individual optimizing behavior, epitomized in the homo economicus, the rational economic *man* (See Ferber 1995 and Nelson 2001). According to Nelson, such a feminist critique targeting the neoclassical approach's unrealistic assumptions, narrow methodology, over-formalism, false detachment etc. is almost always "suppressed because it is *feared*" (Nelson 2003: 111).

It has been contended that the basic economic question of 'choice in the face of scarcity' itself reveals gender bias (Harding 1995). It has also been argued that fundamental concepts and analytical methods of economics are formed by the cultural gender associations, which are, as shown in the following table, are primarily of masculinity for the left-hand side and femininity for the right-hand side. According to Nelson, 'standards of 'rigour' do not drop from the sky, but are created by communities, and the intellectual standards of these communities do appear to reflect the larger cultural biases concerning gender and value' (Nelson 2001: 95).

[6] In "Feminist Economics: Interrogating the Masculinity of Rational Economic Man", Book Review, *Review of Radical Political Economics*, Vol. 33, pp. 495–508

Table 1: The contemporary definition of economics

Core	Margin
Domain	
Market and Government	Family
Individual agents	Society, institutions
Efficiency	Equity
Methods	
Rigorous	Intuitive
Precise	Vague
Objective	Subjective
Scientific	Non-scientific
Detached	Committed
Mathematical	Verbal
Formal	Informal
Abstract	Concrete
Key assumptions	
Individual	Society
Self-interested	Other-interested
Autonomous	Dependent
Rational	Emotional
Acts by choice	Acts by nature

(Nelson 2001: 94)

The main appeal of utilitarianism to economics in particular, and other policy sciences in general, had been its capability to put forth a hypothetically objective base on which moral judgements could be *easily* made. It has been observed that whatever firm ground present in Welfare Economics is mostly utilitarian and also, "the conception of persons as bundles of wants is also built deep into microeconomic theory and its rationality assumptions" (Hollis 1983: 419). Nonetheless, there are many contemporary economic historians who believe that in academic social sciences, utilitarianism is well past its days of glory and it is more or less, "a quaint aspect of the past" (Colander 2000). According to Vivian Walsh, "Utilitarianism had taken up residence in houses built by neoclassical economists and by decision theorists with axiomatic foundations that once looked rock solid. But the economists and decision theorists have been pulling these down now for years themselves, which has left the utilitarian philosophers who sought shelter in these prestigious, Nobel decorated structures, out in the cold" (Walsh 2003: 352). At the same time, as Atkinson puts it, although open admission of being utilitarian is rare among today's

economists, implicit assumptions of the utilitarian kind underlie and inform most of the policy recommendations (Atkinson 1999). This becomes all the more important because these foundational issues are found to be significant for policy judgements, particularly the ones based on economic evaluation.

Utilitarianism in Medicine and Public Health

The development of medicine was largely in congruence with, and complementary to the development of the mechanistic perspective of analysing all phenomena. In fact, we can see interesting parallels in the development of medicine as a discipline on the one hand, and more *social* sciences like economics, on the other. The use of metaphors is a case in point. Early medical scientists used the metaphor of the machine for human body to such a point that, to many of them, body was a machine as the focus was always on the structured similarity (Yadavendu 2002). The Physiocrats, one among the pre-classical schools of thought of political economy, used the machine model of human body with its continuous circulation of blood from the heart to the vital organs as a metaphor for the economy. As it was noted, "it is perhaps not coincidental that the founder of the Physiocratic School of (pre)classical economics was a physician" (Yadavendu 2002: 29).

Even in the eighteenth century, "the concept of the health of people, of populations as a whole, which is the heart of public health theory, was yet to make an appearance" (Yadavendu 2003). However, when it happened, health was seen to be having merely an instrumental importance and any intervention that purportedly had a health augmenting effect was to be justified on purely utilitarian grounds. The utilitarian army of conventional public health experts of the time essentially "dealt with (the) complexity by *ignoring* it" (Hamlin 1996: 253). It would be interesting here

to note that a utilitarian dedication to maximizing positive health outcomes is shared by *both* Hippocratic ethics and public health ethics. While public health, in theory, has tended to shift the focus of medicine from the individual to the society over time, most public health experts, in practice, have retained the clearly utilitarian commitment to maximizing the overall sum of positive individual health outcomes crucial in their analysis and interventions (Bankowski 1997).

The domination of utilitarian approach in public health and health policy discussions could be discerned by the fascination with aggregate health indicators like *average* life expectancy, *overall* infant mortality and so on. The fundamental characteristic of this utilitarian schema is to maximise the amount of collective good (Bankowski 1997). Taking a well-known example, the Black Report of Britain could be shown to be informed by the famous utilitarian principle of maximising the *overall*, in that it suggests that unacceptability of gross social inequalities lies not in the unfairness of the state of affairs, but in the fact that it causes the health of the *overall* population to be statistically lower than it could otherwise possibly be (Peter 2004).

A Summary Critique of the Utilitarian Perspective

The primary criticism that the utilitarian framework is subjected to is its apparent neglect of distributional issues. Since the sum total of utility, or happiness, or well-being is the only thing that matters, inequalities in the distribution are inevitably ignored. This proposed distributional indifference is said to be a major handicap of the utilitarian perspective since *any* improvement in *total* utility would be, by definition, preferred over any efforts to reduce the most blatant of inequalities. The utilitarians take care of this anomaly by assuming that every member of the society has the same

utility function. Such circumvention of real issues by assuming away facts, like taking everybody's marginal utility to be the same, has been assailed ruthlessly by various philosophers. According to Sen, "This (equality thus obtained) is, however, egalitarianism by *serendipity*: just the accidental result of the marginal tail wagging the total dog" (Sen 1979c: 202).[7]

To look at an example, we can consider two identical twins, X and Y,[8] both equally talented and equally eager to realize their potentialities to the fullest possible degree. There is one serious difference between them: while X is blessed with robust health, Y has suffered an injury which has left her with a severe physical hardship. Y, as a result of being disabled, would only be able to derive half as much utility as X from any particular income level. She obviously thus needs to be given more income than X, but utilitarianism, maximizing the sum-total of utility, would give X a higher income than Y, making the latter even worse off than she would be on an equal division of income, where her utility level was already stipulated to be only half X's (Walsh 2003). This explicitly narrow nature of the utilitarian idea of equality makes its scope as a concept informing public policy to be very limited.

Also, it has been observed by Marmot that when the maximisation of overall utility of the society becomes the primary goal of policy, addressing social inequalities in health becomes a low priority (Marmot 2004). In fact, in a strict utilitarian sense, the best way of enhancing the social utility to an optimum level would be to increase social inequalities through policy measures. Putting it differently, by choosing to treat a currently unhealthy person with high life

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[7] Sen Amartya (1979c), op cit. , emphasis added.

[8] Illustrated in Walsh (2003), pp. 357-8, a customised version of Sen's (1979c) Pleasure-wizard-Cripple case, reproduced here almost verbatim.

expectancy who is also well-off and thus has high potential/capacity to benefit *instead of* a poor person with low life expectancy and low life chances, the government can produce greater utility, but of course, at the cost of equity (Sassi et al 2001).

Another major criticism of utilitarianism is about the neglect of non-utility concerns. Utilitarianism has been inimical to any conception of rights based moral theories, to the extent of being dismissive. It is clear from the fact that Bentham called such doctrines 'rhetorical nonsense, nonsense upon stilts' (Sen 1990: 48). No intrinsic importance is associated to rights or freedoms in the utilitarian framework, but they have certain instrumental importance only so long as they enhance utilities (Sen 2000). It has been observed that the consequentialist part of ethical theories like utilitarianism has a tendency to 'ride roughshod over' rights (Walsh 2003).

Also, utilitarianism, where moral rightness of any situation depends directly, and *solely* on consequences, rules out the possibility of a social contract. It rejects any obligation from the part of the state other than that of helping reach the highest overall utility level. When translated to health policy, this could have undesirable consequences since the possibility of a basic minimum level of health to *everyone* is considered one of the primary obligations of a state. Added to this, and largely connected to this is the issue that Utilitarianism could justify the subjugation of minority by the majority. In fact, a minority could be removed from the society, despite their disagreement (and the obvious utility loss), provided that the majority had been 'severely uncomfortable by the presence of the minority', that the utility gains of such *removal* outweighs the losses (Williams 2002).

Yet another important strand of criticism is about the assumption of the utility maximising individual. In his famous paper of 1977, Amartya Sen rejected the idea of

the purely self-interested rational human being arguing that all decisions are certainly influenced by non-utility concerns like class position, sense of duty and family influence (Sen 1977). Apart from the obvious unlikelihood of a *homo economicus,*[9]it had been observed that the usage of utility in the welfarist framework rules out the possibility of collection of any relevant information about the real world. Moreover, the sense in which is utility is used becomes inane and it involves a logical tautology as demonstrated below (Richardson and McKie 2005).

> **Question:** Why do people select X?
>
> **Answer:** Because this maximises utility.
>
> **Question:** How do we know that this maximises utility?
>
> **Answer:** Because people have selected it and this is what is meant by utility.
>
> However, if the definition in this second answer is substituted into the first answer we are left with the following unhelpful restatement:
>
> **Question:** Why do people select X?
>
> **Answer:** Because they have selected it (Richardson and McKie 2005: 269).

An important criticism that utilitarianism faces is the way it considers human beings as mere instruments to achieving utilitarian goals. Theoretically, "utilitarianism permits a person to be sacrificed against his will if the interests of the many are sufficiently served by the sacrifice. Utilitarians have offered many arguments to show that such a sacrifice could not possibly, all things considered, be what does the most good. But the fact remains that, in principle, utilitarianism allows you to use a human being as a mere means to an end" (Korsgaard 2004: 80). Taking an example on the other extreme, a utilitarian would have no qualms about destroying

[9] See Hollis, Martin, and Nell, Edward J. (1975), op cit.

the entire human race but for one individual, if the result makes him/her sufficiently happy. Gasper stated;

> ...a man might be 'cannibalised' for the spare parts needed to save many others *or* a great man; a human guinea pig may be subjected, without being asked, to tests that could yield important knowledge; conscripts can be sent to their death in war; and one generation can be sacrificed for the greater benefit of future generations. If it is clear that a particular sacrifice does not increase total utility, perhaps due to various indirect negative effects, then utilitarians will not advocate it; but they are ready to *consider* sacrificing individuals.[10]
>
> (Gasper 2004: 99-100)

Lastly, and perhaps most importantly, utilitarianism ignores the fact that perceived individual well-being could greatly be influenced by habituation and adaptive attitudes (Sen 2000). The question of survival sometimes forces people to come into terms with their adverse surroundings, but that does not at all mean that their valuations of their well being should be comparable with those of the apparently better-off. This particular aspect has important implications in health as the question of whether perceived health be considered as a base for decisions on redistribution of health resources across social groups comes to the fore. In the case of Third World situations marked by gross socio-economic inequalities, any policy effort that presumes a standardised notion of well-being across socio-economic groups would inevitably lead to erroneous conclusions.

It would be only appropriate to end this section by quoting Karl Marx, who has been one of the most belligerent critiques of classical utilitarianism. Bitingly

[10] Emphasis added.

aggressive to the point of being *ad-hominem*,[11] his attack was very effective nevertheless. According to him,

> Bentham is a purely English phenomenon. (Not even excepting our philosopher, Christian Wolff,) in no time and in no country has the most homespun commonplace ever strutted about in so self-satisfied a way. The principle of utility was no discovery of Bentham. He simply reproduced in his dull way what Helvétius and other Frenchmen had said with esprit in the 18th century. To know what is useful for a dog, one must study dog-nature. This nature itself is not to be deduced from the principle of utility. Applying this to man, he that would criticise all human acts, movements, relations, etc., by the principle of utility, must first deal with human nature in general, and then with human nature as modified in each historical epoch. Bentham makes short work of it. With the driest naiveté he takes the modern shopkeeper, especially the English shopkeeper, as the normal man. Whatever is useful to this queer normal man, and to his world, is absolutely useful. This yard-measure, then, he applies to past, present, and future... Had I the courage of my friend, Heinrich Heine, I should call Mr. Jeremy (Bentham) *a genius by way of bourgeois stupidity.*
>
> (Marx 1867: 758)

It had been observed by E H Carr that the transformation of the laissez-faire 'night-watchman state' of the nineteenth century into the 'welfare state' of today is the most fascinating theme in contemporary history. While criticising utilitarianism for all its glaring shortcomings, it would be however, ahistorical to ignore its role (possibly a purely *consequential* role, since the moral justifiability of the possible

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> The weapon of criticism cannot, of course, replace criticism of the weapon, material force must be overthrown by material force; but theory also becomes a material force as soon as it has gripped the masses. Theory is *capable* of gripping the masses as soon as it demonstrates *ad-hominem*, and it demonstrates *ad-hominem* as soon as it becomes radical. To be radical is to grasp the root of the matter.

–Again Marx himself, in Introduction to A Contribution to the Critique of Hegel's Philosophy of Right, 1844, published in the *Deutsch-Französische Jahrbucher.*

motives has been a matter of debate for long[12]), along with that of the principles of political economy, in this great transition.[13] Various political developments across the world over the last twenty years or so have made proclamations of the *end* of history commonplace. In any case, history has come full circle and now there is a steady, progressive withdrawal of the state from various social sectors, and the market or quazi-market structures are projected to be a credible replacement. It is indeed a paradox of history that the philosophy that had a major role in the transition from laissez-faire to state interventionism, and to a point, in the evolution of the concept of the welfare state, has outlived its own *utility*, by informing the economic policy tools that are used circuitously to do exactly the opposite, ie, rationalizing policies that bring back the laissez faire ideology.

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[12] Richman (2003) observes,

> The 'Sanitarian Movement' from the 1830s was stimulated by the morbidity and mortality toll of rapacious industrialisation. Half the Manchester children died before their fifth birthday. A labourer in Liverpool had a life expectancy of 15 years. Factory reforms, for example, *were not entirely based on humanitarian/moral grounds*. Workers' revolts in Europe had their counterpart in the Chartist's demands. Unemployed workers formed armed gangs. It was important to neutralise growing discontent. (Marx had predicted that the first worker's revolution would be in England because of its advanced stage of industrialisation.)

Richman, Joel (2003), Holding Public Health up for Inspection, in Costello , John and Haggart, Monica, eds. Public Health and Society, Palgrave Macmillan, New York, p. 10. Emphasis added.

[13] Porter (1999) notes;

> The Utilitarian welfare provision for the poor constituted the social scientific management and study of communal life. Bentham drew up his plans for the relief of poverty with an eighteenth-century optimistic belief in the economic value of population growth. The dismal science of political economy, stimulated by Malthus's pessimistic warning about the downside to demographic explosion, did not play a part in Bentham's conception. The principles of both classical political economy and Utilitarianism contributed to the reconstruction of state provision for the relief of poverty and the provision of public health measures. But the Benthamite conception of the social scientific management of communal life was a powerful force in the state provision in public health in nineteenth-century Britain.

-Porter, Dorothy (1999), Health, Civilization and the State, Routledge, London, p61.

Some Practical Issues in the Application of Economic Evaluation in Public Health

As seen in the last chapter, economic evaluation methods are a way in which the utilitarian concern for narrow economic efficiency is applied to various spheres of policy to assist decision making by prioritising alternative courses of action. The application of such techniques in health has been an area of many philosophical, theoretical as well as practical debates that largely remain unresolved. The promotion of a consequentialist attitude is evident in health care in the contemporary world, as the economic rationale, which is the basis of much of the market-oriented reforms to health care systems, proposes promotion of efficiency with highly quantified measures like economic evaluation techniques (Dolfsma 2005). It has been observed; "...the way in which the changes have been advocated and implemented, at least in the case of health care, follows the sequence of banishing elements from the system that are considered noneconomic, attempting to create a pure market de novo.... Greater emphasis is placed on accountancy techniques and on the utilization of (mainstream) economic language and discourse ... As the language and discourse of health care provision changes, so new metrics become increasingly absorbed and embedded.....the newly introduced measures are quickly embedded in existing practices, partly undermining the use for which they have been introduced" (Dolfsma 2005: 351). In this section, the various concerns regarding the use of economic evaluation techniques would be illustrated, in continuation to the earlier critique of utilitarianism.

The first set of issues would have to do with the narrow definition of efficiency that the techniques of economic evaluations endorse, and the notion of selectivity that it, not always fortuitously, promotes. The World Bank, now the largest international

funding agency in health, had proposed that only a *minimal* package of health services should qualify for public funding in developing nations. The interventions in the package were selected according to their cost-effectiveness and all interventions that had low cost-effectiveness were proposed to be left to the market- being funded through either out-of-pocket spending or private insurance. Major shortcomings in this approach have been pointed out such as at any point of time, this minimum package could help avert only one-fifths to one-thirds of the total disease burden of the developing countries (Global Health Watch 2005). In other words, up to eighty per cent of morbidity in developing countries is due to causes, the solutions to which are rendered *cost-ineffective* by the World Bank experts. Such a definition of efficiency, which amounts more to an exclusion criterion helping the ongoing commodification drive of health care, has a very limited use in public health.

Such prioritising tools also tend to ignore interventions that have a complex nature with direct as well as indirect influence on health in favour of interventions that are vertical, presuming unicausality. Clean water provision, which the World Bank has not classified as a cost-effective intervention, is often suggested as an example for the short-sightedness of the experts. It was noted; "Access to adequate volumes of clean water not only reduces the incidence of diarrhoeal disease, intestinal worms, skin and eye diseases, but also improves child and maternal health indirectly by enabling women (who are usually the ones collecting water) to spend more time on other activities like child care or household and economic tasks" (Global Health Watch 2005: 75). Strangely enough, while safe drinking water provision with its multiple linkages to good health is deemed ineffective, Oral Rehydration Solution is presented as the effective intervention, a position bordering on the premise that for the

poor, ORS could be an *alternative* for safe drinking water. This is a typical instance where complex positive inter-linkages are ignored in favour of an easy solution.

Economic evaluations implicitly support and perpetuate vertical, top- down health interventions which, rather than endorsing equity and social transformation are inclined to legitimizing the inequities of the status quo (Werner and Sanders 1997). The inevitable presence of these tools in health care decision-making process virtually rules out any comprehensive programme, since quantifying the intersectoral linkages, thus widening the scope of calculating costs and benefits beyond the *economic,* would necessarily mean transcending the narrow economic framework itself. Putting it differently, the legitimisation of economic evaluation in health policy and planning spheres sees to it that Selective Primary Health Care, which was initially termed as an 'interim' strategy by its architects, is entrenched and here to stay. In view of this, the practice of economic evaluations in health has been alternately termed as 'a smokescreen for cost-cutting efforts', and as 'a code word for rationing' (Neumann 2005).

Moreover, the obsession with drug-based health interventions, completely in harmony with the narrower public health perspective focussing only on biological determinants of the health status of the population rather than the socio- economic ones, strengthens the reductionist perspective of population, and reinforces the conventional wisdom that public health is a minor subset of the health system. Added to this is the fact that, a large proportion of economic evaluation studies are being funded by the pharmaceutical industry itself, leading to biased conclusions, and to the widely held belief that such studies are seen by the industry as an efficient way of marketing their products to the policy makers (Neumann 2005). In fact, several

academic studies have empirically found out that, studies funded by the pharmaceutical industry are more likely to report approving findings than non-industry sponsored ones.[14]

A major weakness of economic evaluation studies is the overtly technical nature of the whole exercise, with the economist/expert *being* mere means to an end, having no control over circumstances. Economic evaluations are basically maximisation of health/utility benefits (or minimisation of health/utility costs) subject to a health budget constraint. This framework, according to critics, cannot be used to defend a given budget or argue for a larger one.

> (The) expert has no basis for commenting on whether the given budget is appropriate. He must remain equally content with a budget which is half or a tenth the size of his existing budget, since it cannot be compared with 'effectiveness' elsewhere.
>
> (Anand and Hanson 2004)

Another important and related issue is the promotion of collective involvement in health activities, which is an important tenet of the Alma Ata declaration. The whole set of economic evaluation tools with their narrow focus are highly and unnecessarily complex and expert-driven to the point of being 'peacock displays of technical ingenuity and skill', thus making the decision making process quite an opaque one in that it is extremely difficult for the public to understand and participate in the discussion leading to the possible decisions (Rogeberg 2003 and Heinzerling and Ackerman 2002). In other words, the very arcane nature of the methods of economic evaluations has catered to the lack of transparency in decision-making so

[14] Azimi and Welch (1998), Friedberg et al. (1999) and Neumann et al (2000) cited in Neumann, Peter (2005), Using Cost-Effectiveness Analysis to Improve Health Care: Opportunities and Barriers, Oxford University Press, New York.

much so that it is often remarked that these "analyses are incomprehensible "black boxes" and that the process obscures important value judgements inherent in them" (Neumann 2005).

Citing examples from population theory, Harvey (1974) has effectively demonstrated that the supposed ethical neutrality of scientific inquiry is nothing but a myth which helps perpetuating the status quo. According to him, scarcity, instead of being something inherent in nature, is something managed by social organisation as it is necessary for the survival of the capitalist mode of production (Harvey 1974: 532). Economic evaluation techniques, which are *necessitated* in the area of health by the perceived scarcity of resources allocatable, achieve the same goal also by creating a feeling of 'otherness' to those lower in the hierarchy- the relatively powerless social groups, thus keeping them, in effect, out of the decision-making process (Everitt and Hardiker 2003).

The application of economic evaluation tools in areas like health is subject to criticism on various methodological grounds as well. We would be dealing with the methodological difficulties with economic evaluations in the following segment. However, before proceeding with these, we would briefly look at the limitations that the foundational evaluative frameworks of welfarism and extra-welfarism share. The importance of such an exercise is the fact that all economic evaluation techniques are based on either of these two evaluative economic frameworks.

A Critical Evaluation of Welfarism and Extra-welfarism

As two normative frameworks which offer different ways in which to measure, value and aggregate costs and outcomes of health interventions, neo-classical welfare theory (welfarism) and extra-welfarism are foundational to the methods of economic

evaluation (Hurley 2000). Despite the fact that welfarism and extra-welfarism differ in some significant ways, it has been contended, "common elements shared by the two frameworks mean that they also share some important limitations" (Hurley 1999). In the following section, we would, in line with Hurley, focus on three shared problematic elements, namely consequentialism, uni-dimensionality with respect to outcomes and the restricted range of equity concepts that could be accommodated within the frameworks.[15]

I. Consequentialism

Strong consequentialism is a fundamental feature of both frameworks. This rules out any action or process or programme being intrinsically valuable since any action being evaluated can only have an instrumental importance, only to the extent of being helpful in achieving some pre-fixed outcome. Violation of basic rights on the way of achieving such pre-determined outcomes is, in the strict sense, permissible in both these frameworks. Nonetheless, the perceived efficiency- equity dichotomy which is resultant of consequentialist thinking, has brought into focus the degree to which the single-minded devotion to efficiency could be at odds with the deeply enshrined values in society. According to Zajac,

> Why do [public utility] regulators, and even the public generally, find it so hard to accept and apply the principles of economic efficiency- principles that are so obvious to trained economists? Is it simply that the public is economically illiterate? Or is it the economists who are out of step, insisting that everyone march to their drummer, when in fact they are deaf to a more fundamental beat that drives society? My continual immersion in public utility regulation has

[15] This section follows, and partly reproduces, the scheme offered by Hurley (1999, 2000).

gradually led me away from "the public is illiterate" view and more toward the "economists are deaf" view.[16]

(Zajac 1985)

II. Uni- Dimensional (Monistic) Outcome Space

The consequences are restricted to a single outcome in both welfarist and extra-welfarist frameworks. In the former, that single outcome is utility and in the latter, it is health. Focusing only on one consequence invariably means that many other outcomes that are valued highly by the members of the society are excluded from the evaluation. A second problem is that unless some very restrictive assumptions are made, complete rankings of alternative policies are impossible in either of the two frameworks. This point is often the focus of a more fundamental criticism- that of the utility of economic evaluation itself. The distortion of the entire structure of economic evaluation is usually rationalised by pointing to the single number that is obtained at the end of the analysis. If that single number is inadequate for judging alternatives, then the rationale of the whole exercise breaks down.

III. Distributional Equity

Within the welfarist approach, each member of the society is given equal weights in the valuation. The utilitarian underpinnings of welfarism hold that total utility is the only thing that matters; and its distribution across individuals is irrelevant. Theoretically speaking, the extra-welfarist framework can be more accommodating to distributional issues. However, in actual practice, it need not be the case. For example, QALYs, the units in which health benefits are assessed follow a strictly utilitarian path. An intervention that generates, say, 1000 QALYs is

[16] Zajac E(1985), cited in Barer, M.L., Getzen, T.E. and Stoddard, G.L.(1999)Eds., Health, health care and Health Economics, John Wiley & Sons, Chichester, p 381.

considered the same whether it achieves this by generating 20 QALYs for 5 people, 5 QALYs for 20 people, or .05 QALYs for 20,000 people.

A Summary Critique of the Methods of Economic Evaluation in Health

The first set of issues is that of Social Welfare Functions, which represent different states of affairs in terms of welfare values or utility levels. A Paretian Social Welfare Function, with or without the compensation principle, is said to be both individualistic and utilitarian for it bases its estimation of the "well-being of society on utilities from individuals' perspectives" (McPake et al 2002). Economic Evaluation methods, particularly the ones based on 'willingness to pay' approach, take that a Social Welfare Function could also be produced using the 'revealed preference' approach, by adding up the consumer surpluses. But the fact remains that, this approach as well as the Paretian one, ignores issues regarding income distribution in the society, and that of inter-personal comparison of utility. An aggregation of individual utilities to form a social welfare function is erroneous since societal well-being, at least in health, is *more than the sum of its parts* (McPake et al 2002).

Opposed to the earlier approaches, a Marxian approach takes individuals to be having diverse tastes and interests that are derived from their class-consciousness. Such a position eliminates the possibility of the existence of a distinctive social welfare function. According to the Marxian position, "to select projects in such a way that net benefits are maximised is meaningless until we have defined *whose* benefits we are talking about" (Stewart 1975).[17] A social welfare function that has value judgements intrinsic in it which indirectly value people who are economically productive over the others, or the wealthy over the poor, cannot be the basis of social

[17] Stewart, F(1975), A Note on Social Cost-benefit Analysis and Class Conflict in LDCs, World Development, Vol.3, No.1, quoted in ibid. P75.

policy. Moreover, the aggregative nature of a social welfare function often cause situations whereby while the costs of an intervention are borne by one social group, the benefit accrue to another group.

Policy analysis using economic evaluation tools like Cost-benefit Analysis purportedly goes further beyond the mere identification of Pareto Efficiency. According to Gasper, "More influential but unstated is the ethic of *utilitarianism,* which is that we should maximise a measure of welfare/utility. It too marches under the banner of efficiency... this utilitarian perspective is seen in economic cost-benefit analysis of projects, and underlies much wider areas of mainstream economic treatment of choices in policy and legislation. The marginalisation of distributive objectives, as lying outside the scope of 'efficiency', may reflect business values. The utilitarian criterion of maximum societal net benefit becomes operationalised for mainstream economists through actual or quasi-market calculations... Discussion of 'efficiency versus equity' then arises, in terms of the supposed trade-offs between maximisation of an aggregate of net societal benefit and its desirable inter-personal distribution" (Gasper 2004: 62-3).

One problem with Cost Benefit Analysis has been the requirement of monetary valuation of health benefits. Apart from the more important ethical objections to putting a money value to life and health, it causes methodological difficulties in comparison. For example, the human capital approach, where the value of health impaired is taken to be the lost earnings of affected individuals (Neumann 2005). Conventional economist critics have noted that, despite providing a relatively 'straightforward calculation', putting a monetary value to the productive potential of society lost through morbidity and mortality is erratic on two grounds- First, because

such an approach has no basis in economic theory and second, as it "ignores underlying consumer preferences and implies that unproductive periods such a s leisure time and retirement were without value" (Neumann 2005).

The willingness to pay approach, which was offered as a theoretically superior procedure, depended on the 'revealed preference' framework as it imputed the consumers' willingness to pay from comparable market prices and wages since private markets for health benefits generally do not exist (Neumann 2005). To take an example, the willingness to accept a health hazard is taken to be equal to the incremental wage or the wage premium that the private sector pays to workers employed in such environments. One problem with such an approach is that in real world situations prices and wages need not be entirely comparable (Neumann 2005). In an imperfect market with informational asymmetries, high unemployment and unorganised production, market prices or wages cannot be taken to be an indicator of rational, voluntary decisions.

Regarding the usefulness of cost-benefit analysis in public health, it has been observed:

> "Many benefits of public health and environmental protection have not been quantified and cannot easily be quantified given the limits on time and resources; thus, in practice, cost-benefit analysis is often akin to shooting in the dark. Even when the data gaps are supposedly acknowledged, public discussion tends to focus on the misleading numeric values produced by cost-benefit analysis while relevant but non-monetized factors are simply ignored"(Heinzerling and Ackerman 2002).

Coming towards Cost Effectiveness analysis, where indicators like QALY[18] are used instead of an explicit monetary valuation to measure health, there have been serious issues like the comparability of different health outcomes represented in the same units. It was noted, "CEA can be used to evaluate interventions for treating schizophrenia and for treating heart disease. But the health outcomes are so different that it is difficult to capture them in the same measurement system and direct comparisons of the QALYs created by the two kinds of interventions may not yet be possible" (Neumann 2005). The problem becomes particularly grave when two interventions are considered for comparison, of which one is predominantly life saving, and the other improving the quality of life. In such a situation, use of an indicator like QALY as a standardised measure would be misleading.

The DALYs are another composite indicator of the QALY variety which is used to measure the 'burden of disease' through calculating the 'time lived with a disability and the time lost to premature mortality' (Anand and Hanson 2004). Developed by the World Bank in its *World Development Report 1993*, the DALY framework is criticised for its explicit values, expressed especially when dealing with people with disabilities, the aged and the infants. In analyses using DALYs, both these categories are taken to contribute less to the disease burden when compared to a normal in her productive prime, and thus in turn receive much lesser priority than they should be receiving (Anand and Hanson 2004).

It has been illustrated using the Indian example that exercises of prioritisation of disease conditions using DALY could narrow down the importance of the

[18] The more infamous DALYs could been seen as a different species within the same genus. See Hurley (2000) and Anand, Sudhir and Hanson, Kara (2004) in Anand, Sudhir, Peter, Fabienne, and Sen, Amartya (ed.) Public Health, Ethics, and Equity, Oxford University Press, New York.

communicable diseases in the total disease burden and also, make the decision making undemocratic due to its inherently technocratic nature(Priya 2001). Brock (2004) noted that the social perspective justifying the DALY measure is problematic as it discriminates against certain people, in giving weights to variations between individuals in their economic and social value to others. The DALY measure is also criticised for selecting one single uniform measure of life expectancy, that of Japan which incidentally has the highest national life expectancy, to inform measurements calculating gains from health interventions. Turning a blind eye on country differences of demographic characteristics could affect the quality of research and thus could have an impact on the priorities identified. Yet another deficiency of the DALY framework is that being an aggregate measure, the use of it cannot suitably inform a decision making process involving a choice between small benefits to a large number of persons and large benefits to a small number of people (Brock 2004).

The 'Burden of Disease Movement' which started in the nineties, and which has had profound influence in health policy in countries like India,[19] has been criticised on various grounds. Firstly, it is put forward that BOD studies should have no role in priority setting since it 'measures problems and not the value of solutions' (Mooney and Wiseman 2000). Also, it has been noted that since the perception of the 'burden' of disease changes from society to society, the conclusions of BOD studies may frequently be erroneous. Furthermore, the pharmaceutical industry using burden of disease studies to get a particular disease to the political agenda of countries and international agencies is fairly common (Mooney and Wiseman 2000). It has been noted, "..That WHO has contracted the BOD/DALY 'virus' from the World Bank is

[19] See Government of India (2005), Burden of Disease in India: National Commission on Macroeconomics and Health Background Papers, Ministry of Health & Family Welfare, New Delhi.

an unfortunate error, which may confuse resource allocation choices and ensure that scarce resources are used inefficiently and inequitably" (Mooney and Wiseman 2000).

Apart from the above criticisms, the process of discounting future costs and benefits in the analysis has come under attack because it tends to trivialise long-term risks when compared to the short-term ones (Neumann 2005). Since many public health programmes have a longer gestation period and take longer periods to produce their benefits, this, translated to policy, could have negative implications. Applying discount rates to such long-term benefits, according to Brock, 'leads to an unwarranted priority to programmes producing benefits more rapidly' (Brock 2004).

Yet another area of concern is the heedless application of these techniques, particularly cost-benefit analysis, to diverse situations even when it is not warranted (a true trait of economic imperialism[20]), but often with the resulting conclusions that are evidently absurd. This disconnection between the abstract academic ideal of economic evaluations and the actual needs of the real world has been widely discussed. It has been noted by Heinzerling and Ackerman;

> Real-world examples of cost-benefit analysis demonstrate the strange lengths to which this flawed method can be taken. For example, the consulting group Arthur D. Little, in a study for the Czech Republic, concluded that encouraging smoking among Czech citizens was beneficial to the government because it caused citizens to die earlier and thus reduced government expenditures on pensions, housing, and health care. In another study, analysts calculated the value of children's lives saved by car seats by estimating the amount of time required to fasten the seats correctly and then assigning a value to the time based on the mothers' actual or imputed hourly wage. These studies are not the work of some lunatic fringe; on the contrary, they apply methodologies that are perfectly conventional within the cost benefit framework".

[20] For a discussion on Economic Imperialism, see Zaratiegui, Jesús M. (1999), The Imperialism of Economics Over Ethics, Journal of Markets and Morality, Vol.2, No.2, pp. 208-219

(Heinzerling and Ackerman 2002)

Keynes had observed a long time ago; "much economic theorizing today suffers... because it attempts to apply highly precise and mathematical methods to material which is itself much too vague to support such treatment" (Rogeberg 2003).[21] The use of cutting edge health economics techniques in the developing world has precisely the same problem; in a situation where even reliable cost data is absent, the use of these techniques lacks even academic relevance, even while the temptation for their application is great. According to Drummond (1998: 206), ' however, to do so [to conduct studies using CEA and CUA] requires both complete and comparable data on all alternatives and requires a formal periodic budget allocation project during which all programmes are assessed simultaneously- both of these requirements seldom exist in health care'.

Despite the plentifulness of methodological criticisms in the literature, an ethical critique of economic evaluations warrants more importance because economic evaluations rest on the utilitarian dictum that "what is morally right is what leads to the greatest good for the greatest number" (Ramsay 1995). It has been proposed that, in the case of health regulation, there may be many instances where a particular intervention could be justified even though its benefits do not outweigh its costs. It follows that some actions whose costs are higher to their benefits may still be morally right and also, some actions whose benefits higher to their costs may still be morally unacceptable (Kelman 1988). Such an ethical critique, is necessarily a critique also of utilitarianism, which we illustrated in the last section. With respect to the utilitarian foundation of economic evaluations, it was noted;

[21] J M Keynes, quoted in Rogeberg, Ole (2003), Taking Absurd Theories Seriously: Economics and the Case of Rational Addiction theories, Philosophy of Science, Vol.71, pp. 263-285.

> Utilitarianism is an important and powerful moral doctrine. But it is probably a minority position among contemporary moral philosophers. It is amazing that economists can proceed in unanimous endorsement of cost-benefit analysis as if unaware that their conceptual framework is highly controversial in the discipline from which it arose— moral philosophy(Kelman 1988).

Since overall utility maximisation is not the only thing that the people expect from the government, the use of techniques that gives the same weights to everyone in society when calculating the health benefits, are often morally unacceptable. The underlying assumption of vulgar distributive neutrality could ethically be wrong in health decision making, since the morals of almost every modern society supports giving priority to the sickest, weakest and the oldest (Neumann 2005). The usual practice of unweighted aggregation has raised criticisms that the QALY approach, as it is practiced normally, embodies a return to classical utilitarianism (Bleichrodt 1999). Taking a specific example, McGregor remarks; "one QALY gained by an otherwise healthy individual through the correction of erectile dysfunction would probably not be considered equivalent to a QALY gained by prolonging the life, by dialysis, of an individual about to die from renal failure" (McGregor 2003).[22] It is clear that, if its power and influence in decision-making circles is not consciously and properly limited, economic evaluations may lead to objectionable outcomes that are not in line with the society's values.

Another criticism of economic evaluations is that these techniques tend to compress incommensurables like health into a utilitarian calculus, representing different states of health or disease with different numbers. This amounts to assuming, albeit in an indirect manner, that the public citizens are selfish consumers who are rational decision makers themselves. This mindless pursuit of "efficiency" is seen by

[22] McGregor (2003) cited in Neumann, Peter (2005), op cit.

many critics not only as violating the unique moral significance of health but also as infringing on the inherent rights to health care (Neumann 2005).

Towards the end, it would be fitting to look at the conclusions of two extensively conducted reviews of economic evaluation literature published in *Health Economics*. Walker and Fox-Rushby (2000), which focused on economic evaluation studies in developing countries expresses concern over the prohibitive cost of the conduct of economic evaluations themselves, which is accentuated by limited local capacity. Of the papers surveyed, it is observed that a majority of the studies ignored the question of generalisability of results, which is an important component of economic analysis. The adoption of a narrow perspective limited the scope of the studies to a great extent as a majority of studies failed to take into account societal costs and benefits. It was also noted that external funding to research ensured that an examination of these evaluation exercises gave a clear indication of the priorities of the international agencies, if not anything else. The authors conclude,

> While it might have been tempting to suggest that studies that adhere to few of the technical principles of economic evaluation serve no purpose for policy-making, in reality results *have been*, and *are being*, used.[23]
>
> (Walker and Fox-Rushby 2000: 691)

Authors of the second literature survey, Olsen and Smith (2001), do an extensive review of 71 studies published between 1985 and 1998. Uni-dimensionality of outcomes was a major issue with a majority of the studies and the authors maintain that the failure to assess opportunity cost in terms of the benefits forgone form the displaced programmes affects the overall scope of the study. In conclusion, the

[23] Ibid, p691, emphasis added.

authors contend that there is an enormous disparity between the 'theoretical glory' of economic evaluation techniques and their *utility* for public health policy.

In the light of the above discussion, we can conclude that *if* Public Health is practiced in the true, broad sense, then the economic and public health measures of value will have to be at odds with one another. Hence, the use of economic principles like narrow economic efficiency to inform and rationalise public health decisions, at times as the lone criterion, raises serious doubts. At a time when the goals set by Alma Ata are still pointed to as the ideals, use of such technically flawed and ethically barren methods would invariably have an adverse impact on the well-being of the people, *both* sick and healthy, if well-being, of course, is calculated in some way other than the utilitarian one. Appropriate use of qualitative methods in health economics for informing evaluative decisions, as suggested by Coast (1999), and a shift from aggregate measures to distributive measures while quantifying health could be, at best, tentative first steps towards a way out of the current deadlock.

SUMMARY & CONCLUSION

A Brief Summary

In the present state of affairs, economics is synonymous with rationing in health policy circles. It is often seen that arguments in favour of the blind pursuit of efficiency are presented as an effective red herring, to shift the focus from the downsizing of the state presence in various social sectors. This work, through a literature review that follows different methods of economic evaluation and their use in health, tries to argue that at least in health, economics and the utilitarian valuation techniques which represent it should only have a complementary and *subordinate* role, and that social policy should be driven more by ethics than economics. A framework that does not recognize the inherent rights of the citizens to a certain level of well-being or the obligations of the state to provide the same cannot be the basis for social policy.

The first chapter examines the concept of publicness with special focus on health, and discusses as to how and to what extent it could be translated to public health policy. The concepts of externalities, public goods and merit goods are spelt out with examples from the area of health. The issues of the so-called free rider problem, market failure and adverse selection are also discussed. A short history of public as well as merit goods in public policy is also presented along with the factors that necessitated their provision. That the standard economic definition of public goods has no practical value vis-à-vis public policy is also brought to notice. It is made clear that while *public goods* is an economic category, merit goods, on the other hand, is mostly an ethical category.

Citing data from the inter-War years, it is shown that the gains in life expectancy, which have been greater in the war decades when compared to the normal

ones, were largely attributable to increased state activity in areas like health, and hardly to economic growth. The concept of Primary Health Care is discussed at length and the basic tenets explained. It is argued that Primary Health Care, in the light of the International Covenant on Civil and Political Rights and Universal Declaration of Human Rights, should be seen in policy as a merit good and provided to all citizens irrespective of their narrow *economic* worth.

The second chapter describes the methods of economic evaluation which are broadly variants of the cost-benefit approach, with particular reference to health. A summary history of the application of the methods, the main objective of which is to choose interventions which would help attain greatest *quantifiable* benefits, directly or indirectly amounting to economic benefits per unit cost, is also presented. Welfarism and extra-welfarism, which together constitute the theoretical basis for various methods of evaluation, are briefly discussed. The transition from a comprehensive PHC to a selective one, which made the use of such measures mandatory in health planning, is examined with the help of the GOBI-FFF case study.

The third chapter starts with an outline of the theory of utilitarian social ethics or utilitarianism, which is the basis of any method of economic evaluation. The three components of utilitarianism namely, Consequentialism, Sum Ranking and Welfarism are explained separately. The appeal of utilitarianism to economics, to the extent of being called as the *economic equivalent* to positivism, is examined. A feminist as well as ecological critique of the perceived positivist divide between knowledge and politics is offered, in passing. The continuous individualisation of public health and the acceptance of utilitarian ideals in the discipline are discussed next.

The chapter moves on to a summary critique of the utilitarian perspective, detailing issues ranging from distributional ones, to monism. It also briefly looks at the limitations that the foundational evaluative frameworks of welfarism and extra-welfarism share. Lastly, the use of various economic evaluation methods are critically looked at, focussing on the practical issues as well as ethical and methodological problems. It is concluded that if Public Health is practiced in the true, broad sense, then the economic and public health measures of value will be at odds with one another and therefore, health policy should be informed by ethics rather than economics.

Conclusion

As seen in the preceding chapters, the link that connects health and economics in the present times is necessarily a utilitarian one, as evident from the famous *Report of the Commission on Macroeconomics and Health*, widely heralded as inspiring and groundbreaking (Katz 2004). The focus of the report is the *profitability* of investments in health, much in line with the *1993 World Development Report.* Health is thus seen as a means to achieve economic ends that are largely utilitarian in nature, while root causes of both poor health and poverty are ignored (Katz 2004). Formation of various National Commissions on Macroeconomics and Health soon followed, one also in India, whose conclusions and suggestions were along the same lines.

When the secretary of the National Commission on Macroeconomics and Health, in the preface of the extensive collection of studies on the burden of disease in India, which claims to deal both with the so-called 'pre-transition diseases' (a rather optimistic name for the diseases of the poor) and 'post-transition diseases', (by and large, diseases of the rich)says '*..A more cost-effective approach to disease*

containment is to prevent its occurrence in the first instance. Prevention can be achieved by well-organized health education and health information dissemination campaigns at the local level and through effective use of the mass media; by enforcing regulations and using financial incentives to modify behaviour towards health-enhancing habits such as a healthy diet, exercise, use of seat belts or helmets, reducing dependence on alcohol or tobacco, etc. Several diseases such as diarrhoea can also be drastically reduced by enhancing access to safe water or *promoting the habit of washing hands with soap...*' (Government of India 2005a: Preface), it is easy to see where things are heading. Given that the possibilities of any transition, either epidemiological or economic, seem bleak in the foreseeable future for a large chunk of the public, it reads more like the preface of a health document from a developed country. Reference to diarrhoea, almost an afterthought, goes to the extent of suggesting the provision of access to safe water and the distribution of toilet soaps as two *equally* effective, and therefore transposable, ways of reducing it. The priorities of the Commission are clear and the documents brought out by it function as a good indicator of the mindset and the concerns of the decision-making class of the country, if not anything else.

The utilitarian intent of the Commission is exceedingly clear when it discusses the identification of what it calls the 'extremely cost-beneficial and cost-effective interventions'. The single-minded pursuit of getting good 'value for money' through 'large gains in outcomes for several major health conditions' is apparent as the veiled suggestion as we can see below, is to focus on the population groups where the *gains*, as a proportion of money invested, are markedly higher, rather than the groups that are needy.

> In countries such as India where there are limited resources and competing demands, not all conditions can be treated and not every intervention provided at public expense. At some point, prioritization of interventions or population groups that need to be supported with public funding becomes inevitable.... Thus, policymakers can focus on several extremely cost-beneficial and cost-effective interventions that simultaneously yield large gains in outcomes for several major health conditions. While the probability of death beyond a certain age, say 70 years, tends to be high and is not very dissimilar across developed and developing nations, the largest gains in mortality reduction are likely to be achieved at younger ages. Jha and Nguyen (2001) show that whereas 18% of all Indians can expect to die before the age of 40 years, only 2% of residents of the UK expect to do so. A less marked difference exists in 'middle age', with 51% of all Indians expecting to die before the age of 70 years compared to 23% for residents of the UK. An understanding of why these differences exist at younger ages offers the possibility of identifying cost-effective interventions, particularly among children and younger adults.
>
> (Government of India 2005a :5)

To cite another example, the 367-page document mentioned above, which claims to cover the pre-transition diseases also, has only two instances where the phrase 'Food Security' appears(Slightly better, *statistically*, considering that the Report of the National Commission on Macroeconomics and Health, all of 187 pages, has only one reference to the phrase). They appear in the same table, in a section on childhood malnutrition as one would expect, which ranks the interventions for the *management* of malnutrition by significance. The self-explanatory table looks as follows:

Table: 1 Interventions (*by significance*) for the management of malnutrition

Outcome	Medical interventions	Non-medical interventions/prevention
Severe malnutrition	• Dietary rehabilitation • Micronutrient supplementation • Treatment of severe anaemia • Treatment of infections • Correcting dehydration	• Maternal education • Community IEC activities • Immunization • ***Food security*** • Preventing low birth weight (adequate antenatal care)
Mild-moderate malnutrition	• Nutritional counselling • Micronutrient supplementation	• Maternal education • Community IEC activities • Immunization • ***Food security***

(Ministry of Health and Family Welfare 2005a:192)

As it is clear from the table, a document which is most likely to guide health policy for the next fifteen years is proclaiming that the most effective interventions to deal with malnutrition are maternal education and community IEC activities for *both* severe and mild/moderate malnutrition. Providing food security is seemingly the least preferred way of curtailing malnutrition, apparently because it is an inefficient intervention. Since *'mal'* could signify both over as well as undernutrition, this amounts to suggesting that in India's case, the problem is obesity and not undernourishment and the whole exercise, if nothing else, shows the extent to which our health experts are removed from reality.

Any discussion on allocation of government funds is essentially a discussion also about the priorities of the decision making bodies and the larger structures which determine the choices that the former makes. The era of neoliberalism has been an era of large-scale militarization of economies and indeed, societies. Joan Robinson had

sounded prophetic when she discussed an aspect of the effect of high military spending on welfare;

> Present policy which combines cutting public expenditure with increasing military investment has introduced a serious distortion into development. From a short period point of view, man-power, including the most expensively trained scientific man-power, is shifting from services such as health and education and the production of civilian goods in general into production of war-like stores.
>
> (Robinson 1981:283)

The existence of a trade-off between defence and health has been an area about which a sizeable body of literature exists. It has been empirically shown that In India's case, such a defence-health trade-off historically existed (Harris et al 1988). In the current situation when at least 3.2 % of GDP is spent on defence as opposed to at most 0.9% on health, the fact that health is an indispensable part of human security has constantly been overlooked by the planners. It is interesting to note that *publicness* of national defence, a notion that springs up every time there is a criticism of the meaninglessness of an arms race or a debate on a further expansion of the defence outlay, is conspicuously absent in the case of debates on health. And indeed, the very *economic* logic of national defence being a public good, and the *very* abstract notions of sovereignty and nationalism that are invoked every now and then, are very *effectively* used to push up the defence budget skywards. Health, with all its publicness and all the military vocabulary of the health planners, remains the quintessential country cousin, every debate on which is on further expenditure cuts and further narrowing down the focus of the publicly funded "offensive".

In the history of humanity, even when the least developed countries fought each other, as they often do, each conflict supplementing the profits of the insatiable arms industry of the developed world, it has never been heard even once that a war was

halted or even postponed for want of funds. There is no reason why the 'war' against disease, to use a popular metaphor of health planners across the globe, be suspended for pecuniary reasons when it is one of the most acceptable of wars; and such a war can only be either won or lost. It was noted;

> 'The threat to lives from foreign invasion is speculative, whereas the threat of disease and accident is real and present, and therefore you must meet these dangers first'
>
> (Harris, in Ramsay 1995: 62)

It is a truism that most of the time, the costs of any war, including the war on disease, are borne by one social group when the benefits are accrued to another and economic evaluation tools used in health cannot address this issue, since they depend on aggregative variables. As we have seen earlier, the existence of theoretical possibilities of built-in ethical considerations into the social welfare function, does not translate into anything concrete when actual economic evaluations are conducted despite the broad acceptance to the fact that a rupee given to or taken from a socio-economic group could never be equal to a rupee given to or taken from another. This situation is partly the consequence of the fact that any economic approach grants health only an instrumental significance rather than the intrinsic importance it merits as an innate part of human well being.

In the light of the above discussion, it could be concluded that unless the experts involved are able to negotiate the budget constraint, and until the community joins the deliberations leading to decision-making as informed participants, any number of constrained maximization exercises that are part of the much larger 'governance without politics' initiative, would remain *way too constrained* to be of any real use to the society. With its obvious handicaps in dealing with various ethical, practical as well as distributional issues, narrow economic tools like the techniques of

economic evaluation should have, if at all they should, very limited policy significance. Even when they are used as part of a much broader evaluation scheme, the focus should not be on choosing between programmes, but at the extreme, on a reallocation of resources among programmes in a way that would improve their implementation as well as make them more equitable.

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