



## Why health equity?

Amartya Sen

*Trinity College, Cambridge, UK*

Text of Keynote Address to Third Conference of the International Health Economics Association on 'The Economics of Health: Within and Beyond Health Care,' York, 23 July 2001.

'The world ... is not an inn, but a hospital,' said Sir Thomas Browne more than three and half centuries ago, in 1643. That is a discouraging, if not entirely surprising, interpretation of the world from the distinguished author of *Religio Medici* and *Pseudodoxia Epidemica*. But Browne may not be entirely wrong: even today (not just in Browne's 17th century England), illness of one kind or another is an important presence in the lives of a great many people. Indeed, Browne may have been somewhat optimistic in his invoking of a hospital: many of the people who are most ill in the world today get no treatment for their ailments, nor the use of effective means of prevention.

In any discussion of social equity and justice, illness and health must figure as a major concern. I take that as my point of departure – the ubiquity of health as a social consideration – and begin by noting that health equity cannot but be a central feature of the justice of social arrangements in general. The reach of health equity is immense. But there is a converse feature of this connection to which we must also pay attention. Health equity cannot be concerned only with health, seen in isolation. Rather it must come to grips with the larger issue of fairness and justice in social arrangements, including economic allocations, paying appropriate attention to the role of health in human life and freedom. Health equity is most certainly not just about the distribution of *health*, not to mention the even narrower focus on the distribution of *health care*. Indeed, health equity as a consideration has an enormously wide reach and relevance.

I shall consider three sets of issues. First, I shall begin by discussing the nature and relevance of

health equity. Second, I shall go on to identify and scrutinize the distinct grounds on which it has been claimed that health equity is the wrong policy issue on which to concentrate. I hope to be able to argue that these grounds of scepticism do not survive close scrutiny. Finally, in the section dealing with general considerations and particular proposals, I shall consider some difficult issues that have to be faced for an adequate understanding of the demands of health equity. It is particularly important in this context to see health equity as a very broad discipline which has to accommodate quite diverse and disparate considerations.

### Health equity and social justice

I have tried to argue in an earlier work, *Inequality Reexamined*, that a theory of justice in the contemporary world could not have any serious plausibility if it did not value equality in some space – a space that would be seen as important in that theory [1]. An income egalitarian, a champion of democracy, a libertarian and a property-right conservative may have different priorities, but each wants equality of something that is seen as valuable – indeed central – in the respective political philosophy. The income egalitarian will prize an equal distribution of incomes; the committed democrat must insist on equal political rights of all; the resolute libertarian has to demand equal liberty; and the property-right conservative must insist on the same right of all to use whatever property each has. They all treasure – and not just by accident – equality in terms of some variable which is given a central position in their respective theories of justice. Indeed, even an aggregative focus, as Benthamite utilitarianism has, involves a connection with equality in so far as everyone

would have to be treated in the same way in arriving at simple aggregates (such as the utility total).

In fact, equality, as an abstract idea, does not have much cutting power, and the real work begins with the specification of what is it that is to be equalized. The central step, then, is the specification of the space in which equality is to be sought, and the equitable accounting rules that may be followed in arriving at aggregative concerns as well as distributive ones. The content of the respective theories turns on the answers to such questions as 'equality of what?' and 'equity in what form?' (On this see [2].)

This is where health becomes a critical concern, making health equity central to the understanding of social justice. It is, however, important to appreciate that health enters the arena of social justice in several distinct ways, and they do not all yield exactly the same reading of particular social arrangements. As a result, health equity is inescapably multidimensional as a concern. If we insist on looking for a congruence of the different aspects of health equity before we make unequivocal judgements, then often enough health equity will yield an incomplete partitioning or a partial ordering. This does not do away with the discipline of rational assessment, or even of maximization (which can cope with incompleteness through reticent articulation), but it militates against the expectation, which some entertain, that in every comparison of social states there must be a full ranking that places all the alternative states in a simple ordering [3,4].<sup>a</sup> Indeed, even when two alternative states are ultimately ranked in a clear and decisive way, that ranking may be based on the relative weighing – and even perhaps a compromise – between divergent considerations, which retain their separate and disparate relevance even after their comparative weights have been assessed.

So what, then, are the diverse considerations? First, health is among the most important conditions of human life and a critically significant constituent of human capabilities which we have reason to value. Any conception of social justice that accepts the need for a fair distribution as well as efficient formation of human capabilities cannot ignore the role of health in human life and the opportunities that persons, respectively, have to achieve good health – free from escapable illness, avoidable afflictions and premature mortality. Equity in the achievement and distribution of

health gets, thus, incorporated and embedded in a larger understanding of justice.

What is particularly serious as an injustice is the lack of opportunity that some may have to achieve good health because of inadequate social arrangements, as opposed to, say, a personal decision not to worry about health in particular. In this sense, an illness that is unprevented and untreated for social reasons (because of, say, poverty or the overwhelming force of a community-based epidemic), rather than out of personal choice (such as smoking or other risky behaviour by adults), has a particularly negative relevance to social justice. This calls for the further distinction between health achievement and the *capability* to achieve good health (which may or may not be exercised). This is, in some cases, an important distinction, but in most situations, health achievement tends to be a good guide to the underlying capabilities, since we tend to give priority to good health when we have the real opportunity to choose (indeed even smoking and other addictive behaviour can also be seen in terms of a generated 'unfreedom' to conquer the habit, raising issues of psychological influences on capability – a subject I shall not address here).

It is important to distinguish between the achievement and capability, on the one side, and the facilities socially offered for that achievement (such as health care), on the other. To argue for health equity cannot be just a demand about how health care, in particular, should be distributed (contrary to what is sometimes presumed). The factors that can contribute to health achievements and failures go well beyond health care, and include many influences of very different kinds, varying from genetical propensities, individual incomes, food habits and life styles, on the one hand, to the epidemiological environment and work condition, on the other.<sup>b</sup> Recently, Sir Michael Marmot and others have also brought out the far-reaching effects of social inequality on health and survival [5–7]. We have to go well beyond the delivery and distribution of health care to get an adequate understanding of health achievement and capability. Health equity cannot be understood in terms of the distribution of *health care*.

Second, in so far as processes and procedural fairness have an inescapable relevance to social justice, we have to go beyond health achievement and the capability to achieve health. As someone who has spent quite a bit of effort in trying to

establish the relevance of the capability perspective (including health capabilities) in the theory of justice, I must also stress that the informational basis of justice cannot consist only of capability information, since processes too are important, in addition to outcomes (seen in isolation) and the capability to achieve valued outcomes [8,9]. For this reason, inequalities even in health *care* (and not just in health achievement) can also have relevance to social justice and to health equity, since the process aspect of justice and equity demand some attention, without necessarily occupying the centre of the stage.

Let me illustrate the concern with an example. There is evidence that largely for biological reasons, women tend to have better survival chances and lower incidence of some illnesses throughout their lives (indeed even female fetuses have a lower probability of spontaneous miscarriage). This is indeed the main reason why women predominate in societies with little or no gender bias in health care (such as West Europe and North America), despite the fact that more boys are born than girls, everywhere in the world (and an even higher proportion of male fetuses are conceived). Judged purely in terms of the achievement of health and longevity, this is a gender-related inequality, which is absent only in those societies in which anti-female bias in health care (and sometimes in nutrition as well) makes the female life expectancy no higher than male. But it would be morally unacceptable to suggest that women *should* receive worse health care than men so that the inequality in the achievement of health and longevity disappears.<sup>c</sup> The claim to process fairness requires that no group – in this case women – be discriminated in this way, but in order to argue for that conclusion we have to move, in one way or another, away from an exclusive reliance on health achievement.

Third, health equity cannot only be concerned with inequality of either health or health care, and must take into account how resource allocation and social arrangements link health with other features of states of affairs. Again, let me illustrate the concern with a concrete example. Suppose persons A and B have exactly similar health predispositions, including a shared proneness to a particularly painful illness. But A is very rich and gets his ailment cured or completely suppressed by some expensive medical treatment, whereas poor B cannot afford such treatment and suffers badly from the disease. There is clearly a health inequal-

ity here. Also, if we do not accept the moral standing of the rich to have privileged treatment, it is plausible to argue that there is also some violation of health equity as well. In particular, the resources used to cure rich A could have been used instead to give some relief to both, or in the case of an indivisibility, to give both persons an equal chance to have a cure through some probabilistic mechanism. This is not hard to argue.

Now, consider a policy change brought about by some health egalitarians, which gives priority to reducing health inequality. This prevents rich A from buying a cure that poor B cannot buy. Poor B's life is unaffected, but now rich A too lives with that painful ailment, spending his money instead on, say, having consoling trips on an expensive yacht on esoteric seas. The policy change does, in fact, reduce the inequality of health, but can it be said that it has advanced health equity? To see clearly the question that is being asked, note that it is not being asked whether this is a better situation overall (it would be hard to argue that it is so), nor am I asking whether it is, everything considered, a just arrangement (which, again, it is not – it would seem to be a Pareto worsening change, given A's desire to use his money to buy health, rather than a yacht). I am asking, specifically, is there more *health equity* here than in the former case?

I would argue that health equity has not been enhanced by making rich A go around exotic seas on his costly yacht, even though inequality in the space of health as such is reduced. The resources that are now used by rich A to go around the high seas on his yacht could have been used instead to cure poor B or rich A, or to give them each some relief from their respective painful ailments. The reduction of health inequality has not advanced health equity, since the latter requires us to consider further the possibility of making different arrangements for resource allocation, or social institutions or policies. To concentrate on health inequality only in assessing health equity is exactly similar to approaching the problem of world hunger (which is not unknown) by eating less food, overlooking the fact that any general resource can be used to feed the hungry better.

The violation of health equity cannot be judged merely by looking at inequality in health. Indeed, it can be argued that some of the most important policy issues in the promotion of health care are deeply dependent on the overall allocation of resources to health, rather than only on distributive arrangements within health care (for example,

the 'rationing' of health care and other determinants of health), on which a good deal of the literature on health equity seems, at this time, to concentrate. Resources are fungible, and social arrangements can facilitate health of the deprived, not just at the cost of other people's health care or health achievement, but also through a different social arrangement or an altered allocation of resources. The extent of inequality in health cannot give us adequate information to assess health equity.

This does not, of course, imply that health inequality is not a matter of interest. It does have interest of its own, and it certainly is a very important part of our understanding of health equity, which is a broader notion. If, for example, there are gross inequalities in health achievement, which arise not from irremediable health preconditions, but from a lack of economic policy or social reform or political engagement, then the fact of health inequality would be materially relevant. Health inequalities cannot be identified with health inequity, but the former is certainly relevant to the latter. There is no contradiction here once we see health equity as a multidimensional concept.

## Contrary arguments

The claim that health equity is important can be resisted on various different grounds, involving empirical as well as conceptual arguments. In various forms these contrary arguments have been presented in professional as well as popular discussions. It is useful to examine the claims of these different arguments and to assess the relevance of health equity in the light of these critical concerns. I do this through posing some sceptical questions as a dialogic device.

(1) *Are distributive demands, in general, really relevant?* It could be argued that distributive requirements in general, including equity (not just health equity), lack ethical significance as a general principle. Utilitarians, for example, are not particularly bothered by inequality in utilities, and concentrate instead on maximizing the distribution-independent sum-total of utilities. A fundamental rejection of inequality as a concern would *inter alia* reduce the relevance of health equity.

There are several different counterarguments that have to be considered in response. First, as John Rawls has argued in disputing the claims of utilitarianism, distribution indifference does not take the distinction between persons adequately

seriously [10]. If a person remains miserable or painfully ill, her deprivation is not obliterated or remedied or overpowered simply by making *someone else* happier or healthier. Each person deserves consideration as a person, and this militates against a distribution-indifferent view. The Rawlsian counterargument is as relevant to health inequalities as it is to the inequality of well-being or utility.

Second, specifically in the field of health, there are some upper bounds to the extent to which a person can be made more and more healthy. As a result even the engineering aspect of the strategy of compensating the ill health of some by better and better health of another has some strict limits.

Third, even if we were somehow convinced by the distribution-indifferent view, there would still be some form of equity consideration in treating all persons in the same way in arriving at aggregate achievements (as utilitarianism does). Distribution-independent maximization of sum-total is not so much a denial of equity, but a special – and rather limited – way of accommodating equity within the demands of social justice.

(2) *Are distributional demands really relevant for health achievement in particular?* It could be argued that equity may be important in some fields, but when it comes ill-health, any reduction of illness of anyone must be seen to be important and should have the same priority no matter what a person's overall level of health, or of general opulence, is. Minimization of a distribution-independent disability-adjusted life years (DALY), which is now used quite widely, is a good example of this approach [11–13].

In responding to this query, it is useful to begin by explicitly acknowledging that any improvement in anyone's health, given other things, is a good ground for recognizing that there is some social betterment. But this need to be responsive to everyone's health does not require that exactly the same importance be attached to improving everyone's health – no matter how ill they presently are. Indeed, as Sudhir Anand and Kara Hansen have argued, distribution-indifference is a serious limitation of the approach of DALY [14,15]. The use of distribution indifference in the case of DALY works, in fact, with some perversity, since a disabled person, or one who is chronically ill, and thus disadvantaged in general, also receives less medical attention for other ailments, in the exercise of DALY minimization, and this has the effect of adding to the relative disadvantage of a person who is already disadvantaged. Rawls's

criticism of the distribution indifference of utilitarianism (in not taking the difference between persons sufficiently seriously) would apply here with redoubled force.

It is interesting to note in that context that the founders (such as Alan Williams and Tony Culyer) of the quality-adjusted life years (QALY) approach, which has some generic similarity with the DALY approach, have been keen on adjusting the QALY figures by distributional considerations.<sup>d</sup> Indeed, Alan Williams notes, in the context of expounding his views on what he calls the 'fair innings' argument (on which, more presently), he had 'for a long time' taken 'the view that the best way to integrate efficiency and equity considerations in the provision of health care would be to attach equity weights to QALYs' [16–18]. There is no particular reason to be blind to health equity while being sensitive to equity in general.

(3) *Given the broad ideas of equity and social justice in general, why do we need the more restricted notion of health equity?* It can be argued that equity-related considerations connected with health are conceptually subsumed by some broader notion of equity (related to, say, utilities or rights). Health considerations may figure *inter alia* in the overall analysis of social equity, but health equity, in this view, does not have a status of its own.

This criticism would have considerable cogency if the idea of health equity were intended to be detached from that of equity and justice in general. But as has been already argued in this essay, the discipline of health equity is not confined to concentrating only on inequalities in health. Health equity may well be embedded in a broader framework of overall equity, but there are some special considerations related to health that need to come forcefully into the assessment of overall justice. In doing this exercise, the idea of health equity motivates certain questions and some specific perspectives, which enrich the more abstract notion of equity in general.

The fact that health is central to our well-being needs emphasis, as does the equally basic recognition that the freedoms and capabilities that we are able to exercise are dependent on our health achievements. For one thing, we are not able to do much if we are disabled or ceaselessly bothered by illness, and we can do very little indeed if we are not alive. As Andrew Marvel had noted in his 1681 poem 'To His Coy Mistress': 'The grave's fine and private place,/ But none, I think, do there embrace.' The penalty of illness may not be

confined to the loss of well-being only, but also include one's lack of freedom to do what one sees as one's agency responsibilities and commitments [1,19].<sup>e</sup> Health and survival are central to the understanding not only of the quality of one's life, but also for one's ability to do what one has reason to want to do. The relevance of health equity for social justice in general is hard to overstress.

(4) *Is it not the case that health equity is subsumed by considerations of equity in the distribution of resources (such as incomes or what Rawls calls 'primary goods')?* In this line of reasoning it is argued that health equity may have, in principle, some importance, but it so happens that this consideration is empirically subsumed by the attention we have to pay to equity in the distribution of resources or 'primary goods', since these economic and social resources ultimately determine the state of people's health.

In response, we can begin by noting that the state of health that a person enjoys is influenced by a number of different considerations which take us well beyond the role of social and economic factors. An adequate policy approach to health has to take note not only of the influences that come from general social and economic factors, but also from a variety of other parameters, such as personal disabilities, individual proneness to illness, epidemiological hazards of particular regions, the influence of climatic variations, and so on. A proper theory of health equity has to give these factors their due within the discipline of health equity. In general, in the making of health policy, there is a need to distinguish between equality in health achievements (or corresponding capabilities and freedoms) and equality in the distribution of what can be generally called health resources. While the latter has relevance, I have argued, through process considerations, it is the former that occupies a central territory of equity in general and health equity in particular.

## General considerations and particular proposals

I turn finally to questions and debates on substantive claims about the content of health equity. Since health equity has to be seen, as I have tried to argue, as a broad discipline, rather than as a narrow and formulaic criterion, there is room for many distinct approaches within the basic idea of

health equity. But the breadth of the idea of health equity is itself in some need of defence. The problems and difficulties in taking a particularly confined interpretation of health equity do not typically lie in the relevance of what that interpretation *asserts* (this is, often enough, not in doubt), but rather in what it *denies*. It is possible to accept the significance of a perspective, without taking that perspective to be ground enough for rejecting other ways of looking at health equity, which too can be important.

Consider Alan Williams's powerful idea of a 'fair innings' [11,14] which relates to – but substantially extends – the approach to health equity as developed by Culyer and Wagstaff [16,20]. Williams develops the case for fair innings with great care, pointing to the ethics underlying the approach: 'the notion of a 'fair innings' is based on the view that we are each entitled to a certain level of achievement in the game of life, and that anyone failing to reach this level has been hard done by, whilst anyone exceeding it has no reason to complain when their time runs out' [16, p. 319]. Developing this insight, Williams arrives at the position that 'if we think (as I do) that a fair innings should be defined in terms of *quality-adjusted life expectancy at birth*, and that we should be prepared to make some sacrifice to reduce that inequality, it is quite feasible to calculate a set of weights representing the differential social value of improvements in quality-adjusted life years delivered to different sorts of people in our current situation'. Through this procedure, Williams neatly captures the important equity issue related to the fact that the differences in prospects of a fair innings can be very large between different social classes.

There is no doubt that this approach has much to commend, and in particular it seems to deal with inter-class inequality in a fulsome way. And yet the question can be asked whether this is all that needs to be captured in applying the idea of health equity. Just to raise an elementary question, let me return to the issue of less health hazards and greater survival chances that women have compared with men. Williams notes this fact, and notes that 'the difference in life expectancy at birth *between men and women* in the UK is even greater than that between social classes'. He goes on to point out that the gender difference in *quality-adjusted life years* is comparatively less than in unadjusted life expectancy (women seem to have a tougher time than men while alive), but also notes

that 'whereas nearly 80% of women will survive long enough to enjoy a fair innings (which in this case I have taken to be 60 QALYs), less than 60% of men will do so'.

Williams point out, using this line of reasoning, 'We males are not getting a fair innings!' (p. 327). The difficult issues arise after this has been acknowledged. What should we then do? If, as the fair innings approach presumes, this understanding should guide the allocation of health care, then there has to be inequality in health care, in favour of men, to redress the balance. Do we really want such inequality in care? Is there nothing in the perspective of process equality to resist that conclusion, which would militate against providing care on the basis of the gender of the person for an identical ailment suffered by a woman and a man?

The issue of gender difference illustrates a more general problem, namely that differences in quality-adjusted life expectancy need not give us ground enough to ignore the demands of non-discrimination in certain vital fields of life, including the need for medical care for treatable ailments. Some times the differences are very systematic, as with gender contrasts, or for that matter with differences in age: indeed as Williams notes, 'whatever social group we belong to, the survivors will slowly improve their chances of achieving a fair innings, and as their prospects improve, the equity weights attached to them should decline' (pp. 326–327). Fair innings is a persuasive argument, but not the only persuasive one. We do not, for example, refuse to take *King Lear* to be a tragedy on the ground that Lear had, before Shakespeare starts his story, a long and good life, with many excellent 'quality-adjusted life years', adding up to more than a 'fair innings'.

This problem is not special only to Williams's proposal, but applies generally to all approaches that insist on taking a single-dimensional view of health equity in terms of achievement of health (or, for that matter, the capability to achieve health). For example, it applies just as much to the policy conclusion arrived at by Culyer and Wagstaff in their justly celebrated paper on 'equity and equality in health and health care' [17] that 'equity in health care should ... entail distributing care in such a way as to get as close as is feasible to an equal distribution of health'. But should we really? A gender-check, followed by giving preference to male patients, and other such explicit discriminations 'to get as close as is feasible to an

equal distribution of health' cannot but lack some quality that we would tend to associate with the process of health equity.

I should make it clear that I am not arguing for giving priority to process equity over all other considerations, including equity in health and the capability to achieve good health. Culyer and Wagstaff are right to resist that, and they would not have done better if instead they were to give absolute priority, in general, to equity in health delivery, irrespective of consequences. They take us not from the frying pan to fire, but rather from fire to the frying pan. But I want to be neither in the fire, nor in the frying pan. Health equity is a broad and inclusive discipline, and any unifocal criterion like 'fair innings' or 'equal distribution of health' cannot but leave out many relevant concerns [21]. The assertive features of what Williams, Culyer, Wagstaff and others recommend deserve recognition and support, but that should not be taken to imply the denial of the relevance of other claims (as they seem to want, through giving unconditional priority to their unifocal criterion).

To conclude, health equity has many aspects, and is best seen as a multidimensional concept. It includes concerns about achievement of health and the capability to achieve good health, not just the distribution of health care. But it also includes the fairness of processes and thus must attach importance to non-discrimination in the delivery of health care. Furthermore, an adequate engagement with health equity also requires that the considerations of health be integrated with broader issues of social justice and overall equity, paying adequate attention to the versatility of resources and the diverse reach and impact of different social arrangements.

Within this broad field of health equity, it is, of course, possible to propose particular criteria that put more focus on some concerns and less on others. I am not trying to propose here some unique and pre-eminent formula that would be exactly right and superior to all the other formulae that may be proposed (though it would have been, I suppose, rather magnificent to be able to ordain one canonical answer to this complex inquiry). My object, rather, has been to identify some disparately relevant considerations for health equity, and to argue against any arbitrary narrowing of the domain of that immensely rich concept. Health equity is a broad discipline, and this basic recognition has to precede the qualified acceptance of some narrow criterion or other for specific – and contingently

functional – purposes. The special formulae have their uses, but the general and inclusive framework is not dispensable for that reason. We need both.

### Acknowledgements

For helpful discussions, I am most grateful to Sudhir Anand, Lincoln Chen, Anthony Culyer and Angus Deaton. I would also like to acknowledge support from the Rockefeller Foundation funded project on Health Equity at the Harvard Center for Population and Development Studies.

### Notes

- a. I have discussed the need for incomplete orderings and reticent articulations in [3,4].
- b. The importance of the distinction between health and health care for the determination of public policy has been well discussed, among other issues, by Ruger [Jennifer Prah Ruger, 'Aristotelian Justice and Health Policy: Capability and Incompletely Theorized Agreements, Harvard University, PhD dissertation 1998].
- c. This issue is discussed in [1], Chapter 6.
- d. The exponents of the QALY and DALY strategies have discussed their differences rather prominently in recent debates between York and Geneva. I shall not, however, go into those differences in this essay.
- e. In [19] see Gavin Mooney, 'Economics, Communitarianism, and Health Care'; Claude Schneider-Bunner, 'Equity in Managed Competition'; Han Bleichrodt, 'Health Utility Indices and Equity Considerations'; Jeremiah Hurley, 'Welfarism, Extra-Welfarism and Evaluative Economic Analysis in the Health Sector'; Thomas Rice, 'The Desirability of Market-Based Health Reforms: A Reconsideration of Economic Theory'.

### References

1. Sen A. *Inequality Reexamined*. Harvard University Press: Cambridge, MA, Clarendon Press: Oxford, 1992.
2. Sen A. Equality of what? In *Tanner Lectures on Human Values*, McMurrin S (ed.). Cambridge University Press: Cambridge, University of Utah: Salt Lake City, 1980, and see Ref. [1].
3. Sen A. *Collective Choice and Social Welfare*. Holden-Day: San Francisco, 1970 (republished, Amsterdam: North-Holland, 1979).
4. Sen A. Maximisation and the act of choice. *Econometrica* 1997; **65**: 745–779.

5. Marmot MG, Davey Smith G, Stansfeld SA *et al.* Health inequalities among British civil servants: the Whitehall II study. *Lancet* 1991; **337**: 1387–1393.
6. Marmot MG, Bobak M, Davey Smith G. Explorations for social inequalities in health. In *Society and Health*, Amick BC, Levine S, Tarlov AR, Chapman D. (eds). Oxford University Press: London, 1995.
7. Wilkinson RG. *The Unhealthy Societies: The Afflictions of Inequality*. Routledge: New York, 1996.
8. Sen A. Well-being, agency and freedom: the Dewey lectures 1984. *Journal of Philosophy* 1985; **82**: 169–221.
9. Sen A. Consequential evaluation and practical reason. *Journal of Philosophy* 2000; **97**: 477–502.
10. Rawls J. *A Theory of Justice*. Harvard University Press: Cambridge, MA, 1971.
11. Murray CJL. Quantifying the burden of disease: the technical basis for Disability Adjusted Life Years. *Bulletin of World Health Organization* 1994; **72**.
12. Murray CJL, Lopez AD. *The Global Burden of Disease*. Harvard University Press: Cambridge, MA, 1996.
13. World Health Organization. *World Health Report*. WHO: Geneva, 2000.
14. Anand S, Hansen K. Disability adjusted life years: a critical review. *J Health Econ* 1997; **16**(6): 685–702.
15. Anand S, Hansen K. DALYs: Efficiency versus equity. *World Development* 1998; **26**(2): 307–310.
16. Williams A. If we are going to get fair innings, someone need to keep the score. In *Health, Health Care and Health Economics*. Barer ML, Getzen TE, Stoddart GL (eds). Wiley: New York, 1998; 330.
17. Culyer AJ, Wagstaff A. Equity and equality in health and health care. *J Health Econ* 1993; **12**: 431–457.
18. Culyer AJ. Equality of *what* in health policy? Conflicts between contenders. *Discussion Paper No. 142*, Centre for Health Economics, University of York, 1995.
19. Barer ML, Getzen TE, Stoddart GL (eds). Wiley: New York, 1998.
20. Williams A. Intergenerational equity: an exploration of the ‘fair innings’ argument. *Health Econ* 1997; **6**: 117–132.
21. Anand P, Walloo A. Utilities versus right to publically provided goods: arguments and evidence from health care rationing. *Economica* 2000; **67**: 543–577.