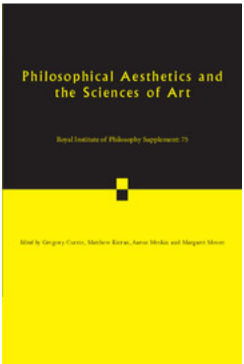

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Quality of Life and Resource Allocation

MICHAEL LOCKWOOD

A new word has recently entered the British medical vocabulary. What it stands for is neither a disease nor a cure. At least, it is not a cure for a disease in the medical sense. But it could, perhaps, be thought of as an intended cure for a medicosociological disease: namely that of haphazard or otherwise ethically inappropriate allocation of scarce medical resources. What I have in mind is the term 'QALY', which is an acronym standing for *quality adjusted life year.* Just what this means and what it is intended to do I shall explain in due course. Let me first, however, set the scene.

I

Problems of resource allocation within medicine arise at a number of different levels. First, one might ask how much of a society's resources should be devoted to health care at all, as opposed to housing, say, or defence. (For what it may be worth, the United States is usually said to devote 10 per cent of its gross national product to health care—though some authors claim that the true figure is substantially higher. By contrast, most Western European countries devote about 7 or 8 per cent, whereas Britain devotes only 5.6 per cent. It is widely held, however, that Britain's relatively low figure is largely compensated for by substantially greater cost efficiency, as compared with other countries. Perhaps; certainly this argument is regularly paraded by the British Government whenever it is suggested that the National Health Service is underfunded!) Given some overall allocation of resources to health care in general, one can then ask how these resources should be distributed amongst various different sorts of health care expenditure: for example, primary versus hospital care, or preventive medicine versus care of the already ill. Then, within such broader categories, one can ask how one should distribute between different specializations: cardiac versus obstetric units, say, in the case of hospital medicine. And both within and across specializations, one can ask what should be the relative funds allocated for different forms of treatment: kidney transplants versus renal dialysis, hip replacement operations versus coronary by-pass surgery, cervical smears versus primary geriatric nursing care.

It is customary to lump together questions of all these different sorts as problems of *macroallocation*. *Micro*allocation questions, by contrast, arise when decisions have already been made about matters of the kinds just instanced. One has, let us suppose, more patients who stand to benefit by a certain form of treatment than it is possible, given limited resources, to give the treatment to. And the question is: who then gets it? What sorts of criteria should one then appeal to? What selection procedures should one adopt? This problem assumes a special poignancy, of course, when the treatment in question is one without which patients will die. The dramatic potential of such decisions has been widely exploited in fiction, from Bernard Shaw's *The Doctor's Dilemma* (1911)[1] to James Balfour's (1969) short story 'The Junior Physician and the Court of Final Appeal'[2] and a 1966 *Dr Kildare* series, in which a lay panel is established by Dr Gillespie to decide which of a number of clinically eligible patients should be chosen for a limited number of places on a newly installed artificial kidney machine. (The model for Dr Gillespie's committee appears to have been the so-called 'God Committee' of the Seattle Artificial Kidney Center, which from 1961 to 1967 sat in judgment over patients suffering from end-stage renal failure).[3]

Now a natural response to allocation problems, both at macro and micro levels, is to say simply: one should put one's resources where they will do the most good. Well, yes, perhaps one should. But that then raises the further question: what does one mean by 'the most good'? One kind of good, arguably the most important kind of good, that health care may achieve is the saving of lives, or more precisely (if less optimistically) postponing death. So one measure—albeit a very crude and one-sided measure—of the good that health care does would be the overall extension of live expectancy that it generates: years of life gained. Some writers have argued that we should give a very high priority to this aim of maximizing aggregate years of life gained; and that, moreover, this aim morally requires an allocation of resources, both within and outside medicine, that is radically at odds with the present allocation pattern in developed countries. So argued Dr Donald Gould in 1975:

> In the name of justice, as well as efficiency, we have got to adopt new methods of medical accounting. One such assesses the relative

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[1] Bernard Shaw, *The Doctor's Dilemma: A Tragedy* (first published in 1911), A. C. Ward (ed.) (London: Longman's Green, 1960).

[2] 'The Junior Physician and the Court of Last Appeal', in James Balfour, *Court Short* (London: Hutchinson, 1969), 171–189.

[3] Guido Calebresi and Philip Bobbit, *Tragic Choices* (New York: W. W. Norton, 1978), 187–188, 209 n., 232–233 n.

> importance of threats to health in terms of the loss of life-years they cause. Calculations are based upon the assumption that all who survive their first perilous year ought then to live on to the age of 70 (any extra years are a bonus). In Denmark, for example, there are 50,000 deaths a year, but only 20,000 among citizens in the 1–70 bracket. These are the ones that count. The annual number of life-years lost in this group totals 264,000. Of these, 80,000 are lost because of accidents and suicides, 40,000 because of coronary heart disease, and 20,000 are due to lung disease. On the basis of these figures, a large proportion of the 'health' budget ought to be spent on preventing accidents and suicides and a lesser but still substantial amount on attempting to prevent and cure heart and lung disease. Much less would be spent on cancer, which is predominantly a disease of the latter half of life, and which therefore contributes relatively little to the total sum of life-years lost. Little would go towards providing kidney machines, and even less towards treating haemophiliacs. No money at all would be available for trying to prolong the life of a sick old man of 82.[4]

There are several things that might be said in response to this passage. First, it is unclear why Gould thinks that *justice,* as well as efficiency, calls for these methods of medical accounting. What is involved in being just, in such contexts, is a question to which we shall return in due course. Secondly, Gould is here concentrating on quantity of life lived to the exclusion of its quality. Most of what is done in the name of health care is directed towards the alleviation of pain, discomfort and disability, rather than the extension of life, but is surely no less valuable on that account. Moreover, things which rank equal in terms of the threat to life that they pose, may well rank unequal in terms of their effect on the quality of life, or in terms of the typical quality of the lives that they threaten to cut short; both sorts of consideration are surely relevant to the question of the relative priority to be given to their prevention or cure.

Thus, judgments about which of several forms of health care expenditure does the most good calls, in general, for one to balance against each other the life-enhancing and the life-extending aspects of health care: quality and quantity of life have somehow to be rendered mutually commensurable. This is where QALYs come in. I quote from Alan Williams, of the University of York, who has done most to develop this approach:

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[4] Donald Gould, 'Some Lives Cost Too Dear', *New Statesman* November (1975), quoted in Jonathan Glover, *Causing Death and Saving Lives* (Harmondsworth: Penguin Books, 1977), 220–221.

> The essence of a QALY is that it takes a year of healthy life expectancy to be worth 1, but regards a year of unhealthy life expectancy as worth less than 1. Its precise value is lower the worse the quality of life of the unhealthy person (which is what the 'quality adjusted' bit is all about). If being dead is worth zero, it is, in principle, possible for a QALY to be negative, i.e. for the quality of someone's life to be judged worse than being dead.
>
> The general idea is that a beneficial health care activity is one that generates a positive amount of QALYs, and that an efficient health care activity is one where the cost per QALY is as low as it can be. A high priority health care activity is one where the cost-per-QALY is low, and a low priority activity is one where cost-per-QALY is high.[5]

The assumption here is that there is some rational way of trading off length of life against quality of life, so that one could say, for example, that three years of life with some specified degree of discomfort, loss of mobility or whatever was worth two years of normal life. Such trade-offs are, of course, often inescapable in medical practice. Take, for example, a patient suffering from laryngial carcinoma, where the choice of treatments is between laryngectomy, which is incompatible with normal speech, but has a 60 per cent five-year survival rate, and radiotherapy, which preserves normal speech but has only a 30–40 per cent five-year survival rate. Here, presumably, the ethically appropriate thing for the doctor to do is put the choice to the patient—both on the grounds of autonomy and on the grounds that the patient is probably better able to judge, in terms of his own values and way of life, what sort of impact on the quality of his own life the inability to speak normally is likely to have. (For what it is worth, nearly all patients, faced with this particular choice, in fact opt for surgery.) But the resource of passing the decision back to the individual patient is unavailable in microallocation cases, where different patients are competing for the same resource, and would both choose to be treated, or in macroallocation cases, where again we are dealing with different patients, this time mainly future patients, and with questions of overall funding.

What economists who favour the QALY approach do, in a macroallocation context, is take a checklist of health factors that are likely to affect the perceived quality of life of normal people, and assign weightings to them. (Most work done in Britain has been based on the *Rosser distress and disability index,* which health economists would be the first to admit provides only rather a crude measure of quality, but one

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[5] Alan Williams, 'The Value of QALYs', *Health and Social Service Journal* July (1985), 3.

which they would hope to improve upon in time.[6]) There is, of course, an inescapable element of arbitrariness here, both in the choice of factors to be taken into account and in the relative weightings that are attached to them, which, as already pointed out, would differ markedly from patient to patient. (Immobility, for example, is likely to prove far more irksome to the athlete than to the philosopher.) But the factors and their associated weightings are mostly so chosen as to reflect the feelings and considered judgments which the average or representative patient is likely to evince in practice, when faced with various forms of disability or discomfort, either in prospect or, better, having actually experienced them. On this basis, a given form of treatment is assigned a QALY value, corresponding to the number of QALYs such a patient can look forward to with the treatment minus the number of QALYs the patient can look forward to if untreated. One then calculates what each QALY gained by these means actually costs.

Whatever philosophical reservations one might have about such an exercise (and I will turn to these in due course), it has yielded some interesting, indeed surprising, results. In Britain there is (or certainly was in the recent past) a widespread feeling that heart transplants represent a wasteful use of medical resources, that the benefits yielded are simply not sufficiently great to justify the cost. But on the other hand, people who say this will usually argue that not enough funds are, in Britain, allocated to long-term renal dialysis. It is widely regarded as a scandal that a treatment that is so effective in extending life should not be made universally available. Williams, evaluating these and other forms of treatment using the notion of a QALY, has come to a very different conclusion. Williams assigns to heart transplantation a QALY value of 4.5 (the point, neglected by most critics of heart transplants, being that their effect, when successful, on the quality of life is dramatic), whereas home and hospital dialysis receive QALY values of 6 and 5 respectively (the neglected point here being that, for most people, long-term dialysis represents a considerable ordeal).[7] Nevertheless, dialysis, so far, comes out somewhat ahead of heart transplants. But now the cost per patient of long-term dialysis is considerably greater than that of a heart transplant. So the cost per QALY is only £5,000 in the case of heart transplants, as compared to £11,000 and £14,000 respectively, in the case of home and hospital dialysis.[8]

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[6] P. Kind, R. Rosser and A. Williams, 'Valuation of quality of life: Some Psychometric Evidence', in M. W. Jones-Lee, *The Value of Life and Safety* (Amsterdam: Elsevier/North-Holland, 1982).

[7] Alan Williams, 'Economics of Coronary Bypass Grafting', *British Medical Journal* **291** (3 August 1985), 328.

[8] Ibid.

Actually, all three figures turned out to be very high as compared with, say, hip replacement or heart valve replacement and pacemaker implantation, whereas Williams assesses the costs per QALY gained as, respectively, £750, £900 and £700;[9] in these latter operations one gets far more QALYs for one's money. In most parts of Britain there are waiting lists for all these operations; in the case of hip replacement operations the average waiting list under the National Health Service is three years (and in some areas is as high as five years)—it is not in the least unusual for people to die before they reach the head of the queue! Someone who believed that macroallocation in health care should be determined wholly on the basis of directing funds to where they can generate the maximum number of QALYs might well conclude from these figures that given a fixed health care budget, it would be rationally appropriate actually to transfer funds from such relatively high cost-per-QALY, albeit life-saving, forms of treatment as renal dialysis, to such things as hip-replacement operations, right up to the point at which the waiting lists had been eliminated—even if this meant providing no long-term dialysis at all! A pretty startling conclusion, hardly less radical than Gould's.

II

Appealing to QALYs in a macroallocation context, despite the fact that, as we have just seen, it is likely to result in recommendations wildly at odds with present practice, tends to raise fewer hackles than its application to problems of microallocation. Indeed, the advocates of this approach themselves tend to talk less about microallocation than macroallocation. But the approach has clear implications for microallocation too. It implies, for example, that life-saving treatment should, other things being equal, go to those who, with the treatment, will have a longer life expectancy; thus, generally speaking, it will favour younger over older patients. This is in line with actual policy within the British National Health Service with regard to renal dialysis: most centres operate an effective 65-year cut-off. It also implies that, if there appeared, on other grounds, to be nothing to choose between two rival candidates for some life-saving treatment, but one was suffering from a condition, whether or not related to whatever it was that threatened his life, that detracted from its quality, then one should prefer to treat the other candidate. These two sorts of consideration were run together in an example that became a bone of contention at the British Medical Association Annual Scientific Meeting at Oxford in April 1986.

[9] Ibid.

> [S]ay two people needed lifesaving treatment and there were the resources to treat only one, say one was young and fit and the other was older with arthritis, who should get the treatment? If QALYs were used the younger patient would inevitably and always get the treatment but was that fair?[10]

The economist, Professor Alan Maynard, a champion of the QALY approach, defended such a policy; the philosopher John Harris attacked it, arguing that it was indefensibly discriminatory, and advocated instead the use of a lottery in such cases.

These health-care economists have, it appears, rediscovered utilitarianism. Indeed the QALY approach has a pleasantly nostalgic air, for those familiar with Jeremy Bentham's 'felicific calculus'.[11] Most of the philosophical doubts one might have about the QALY approach would be particular instances of familiar charges that have been laid against utilitarianism. It should be emphasized, however, that the use of QALYs does not commit one to *classical* or *eudaimonic* utilitarianism: that is to say, there is no suggestion that the good is to be equated with happiness. If we adopt a terminology recently advocated by Amartya Sen,[12] the QALY approach to allocation is, strictly speaking, *welfarist* rather than utilitarian—welfarism being the doctrine that we should so act as to maximize aggregate benefit. Classical utilitarianism is thus a particular form of welfarism, characterized by its equation of benefit with happiness. The concept of a QALY is, of course, committed to no such equation. Indeed, it is in one sense only a framework, requiring to be fleshed out by some substantive conception of what contributes to or detracts from the intrinsic value or worthwhileness of a life, and to what degree—a conception, that is, of what it is about a life that determines of how much benefit it is to the person whose life it is. To this extent, the concept is highly permissive: one can, as it were, plug in whatever conception of value one personally favours. The quality of life indices that are used in practice, as I indicated earlier, seem to be grounded in people's actual expressed values, preferences and attitudes. Is this because people are supposed, by and large, to be their own best judges of the degree to which various things do or would contribute to or detract from the value of their lives? Or is it because, whether they are the best judges or not, it is thought democratically proper that resource allocation reflect, as far as possible, people's actual

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[10] Tessa Richards and Linda Beecham, 'The BMA in Oxford', *British Medical Journal* **292** (26 April 1986), 1119–1120.

[11] Jeremy Bentham, *The Principles of Morals and Legislation* (1789), Chs. 1–5.

[12] See Amartya Sen, 'Utilitarianism and Welfarism', *Journal of Philosophy* **76** (September 1979).

preferences—a kind of oblique appeal to personal autonomy? It is unclear, though it perhaps does not much matter for practical purposes. My own view is that there are actually three ways in which people's preferences are of moral relevance here. First, what people here and now want is something that ought to be given weight (though not necessarily decisive weight) in the name of a principle of collective or individual self-determination. Secondly, it is, other things being equal, in people's interests that their preferences are satisfied; to that extent the degree to which people's actual circumstances are consonant with their preferences is one of the things, but by no means the only thing, that should be taken into account in making an overall assessment of the quality of someone's life. And finally, people have what philosophers call 'privileged access' to their own lives; they know, better than anyone else can, just what it is like to be them. To that extent, their own judgments about conditions they have actually experienced, whilst far from infallible (especially where what it is that detracts from the quality of their lives is itself something that may affect their judgement, or, where relevant, memory), nevertheless have great authority.

Supposing that one were clear about *what* it was that one was trying to measure, there would still, of course, be room for considerable scepticism about the extent to which it was possible to measure it. From a certain point of view, the idea of putting a yardstick up against a life, whether real or hypothetical, and reading off some numerical value representing its quality or degree of worthwhileness, may seem simply preposterous. On the one hand, one might reasonably doubt whether the moral universe was so constituted that there was a fact of the matter as to just how many years of life under circumstances A were equivalent in value to one year of life under circumstances B, whether one were comparing within or across lives. And even assuming that there were uniquely correct answers to such questions, one might reasonably doubt whether there was any reliable method of divining them. (Interpersonal comparisons have, historically, been the subject of particular scepticism here, on both these grounds).

But one must be careful here. It would be a mistake to suppose that the validity or usefulness of the QALY approach hinged either on there being, or on one's being able to determine, a *precise* answer to the question how many QALYs a given span of life added up to. Faced with the sort of comparisons that the QALY approach requires, most people, I imagine, would say this sort of thing: 'Well, a year of normal life would certainly, for me, be worth at least eighteen months of life paralysed from the waist down, but it wouldn't be worth three years under those conditions.' In other words, most people would feel able to set numerical *limits* with some confidence—limits that would generally be narrower if they were judging for themselves than if they were judging for others. Now the point of the QALY approach is to help determine how resources should be allocated, especially as a matter of general policy. And for that purpose, it may be important to know *whether* renal dialysis, say, represents a better use of National Health Service funds than coronary bypass surgery; but it is probably not nearly so important, if important at all, to know just *how much* better. Suppose, then, one were to make the experiment of varying the numerical values one put into the equation, within the limits of what would strike one as intuitively reasonable. In many cases one would find that that made no difference to the *ordinal* conclusions that one ended up with, that is to say conclusions as to what was better than what. Such conclusions would then have the feature that economists sometimes describe as *robustness*—invariance with respect to adjustments of the input values, within the range of one's uncertainty. Thus, only a very radical scepticism, according to which one could not even, with any confidence, set numerical limits in such comparisons, would have the effect of rendering the QALY approach wholly useless. And such wholesale scepticism would, I should have thought, be very difficult convincingly to sustain.

III

Any sane moral theory is bound, it seems to me, to incorporate a welfarist element: other things being equal, it should be regarded as morally preferable to confer greater aggregate benefit than less. To this extent, it seems to me that QALY calculations, or something equivalent to them, should certainly be regarded as highly germane to the resolution of allocation problems within medicine. And, as I have just indicated, the fact that any assignment of precise QALY values is bound, in practice, to involve a degree of arbitrariness need not invalidate the qualitative conclusions that emerge, to the extent that the latter prove robust. But of course, it is one thing to say that welfarist considerations deserve to be given weight (great weight, even) in decisions regarding allocation, quite another to say that they should invariably be regarded as decisive.

The intuition from which we started was that medical resources should be allocated in such a way that they do the most good. But it is far from clear that 'the most good', here, should simply be equated with 'the greatest aggregate benefit'. And even if one thought it should, it is far from clear that allocation according to QALYs is what would best promote aggregate benefit, given that there are many things relevant to aggregate benefit that QALY calculations leave totally out of account.

If one reflects on what actually goes to determine the overall quality of one's life, one will find that this is dependent on many things that are likely to be overlooked in the rather crude quality of life indices used by the health care economists. This will include one's material and social circumstances: where one lives, what sort of job one has, if any, whether one lives alone or has a family—to what extent, in particular, one possesses those things that Rawls refers to as the 'social and material bases of self-respect'. But it will also include a host of less tangible things, some of them closely bound up with the latter. These will include, for example, one's temperament and psychological make-up in general, the character of one's relationships with others, the extent to which has a sense of security and of consonance between what one feels onself to be and what one finds oneself doing, and also a sense of being in command of one's life and of being free to pursue one's chosen projects, but neither effortlessly nor with too much fruitless struggle, and quite generally, the degree of stress, boredom and frustration, or satisfaction and fulfilment that is involved in day-to-day living.

There there is *social worth:* a calculation confined to QALYs leaves out of account the effects that deciding to treat this person rather than that might have on the lives of others—something that greatly exercises the doctors, Sir Patrick Cullen and Sir Colenso Ridgeon, in Shaw's play.

The situation is that Ridgeon has found a cure for tuberculosis, but only has the time, staff and laboratory facilities to take on one more patient. Two patients then present themselves. The one, Louis Dubedat, is an artist of genius but morally totally unscrupulous: he borrows money under false pretences which he never returns, and worse, turns out to be a bigamist. The other, Blenkinsop, is an impoversished doctor, hardworking and morally upright, but possessing no great skill or expertise. The following conversation ensues:

> SIR PATRICK: Well, Mr. Saviour of Lives: which is it to be? that honest decent man Blenkinsop, or that rotten blackguard of an artist, eh?
>
> RIDGEON: It's not an easy case to judge, is it? Blenkinsop's an honest decent man; but is he any use? Dubedat's a rotten blackguard; but he's a genuine source of pretty and pleasant and good things.
>
> SIR PATRICK: What will he be a source of for that poor innocent wife of his, when she finds him out?
>
> RIDGEON: That's true. Her life will be a hell.
>
> SIR PATRICK: And tell me this. Suppose you had this choice put before you: either to go through life and find all the pictures bad but all the men and women good, or to go though life and find all the pictures good and all the men and women rotten. Which would

> you choose? . . . To me it's a plain choice between man and a lot of pictures.
>
> RIDGEON: It's easier to replace a dead man than a good picture.[13]

Social worth will be highly sensitive to such considerations as whether one has dependants and, if so, how one's death would affect the quality of their lives, how important is the job one does, and how easy it would be to find someone else to do it comparably well.

There are economic considerations too. Some health care economists have advocated taking into account prospective earnings, on the grounds that if taxpayers' money is being used to pay for a given treatment its *real* cost (or real cost per QALY) will be less in the case of those patients treatment of whom will make the greatest positive impact on their net future contribution to government funds, and thus on the government's capacity to fund health care and welfare programmes generally. The economic cost, to the state, of someone's death or continued incapacitation also enters under this heading. I have seen it argued on this basis that, given a cardiac patient with dependants, incapacitated to the point of being unable to work, it may, all things being considered, actually be less costly for the state to pay for him to have a heart transplant (assuming this to be the only suitable treatment) than to allow him to die or continue living in a severely incapacitated state. (The point here is that if the transplant enables someone to return to work and support his family, then both he and they will cease to be a charge upon the state.) Such considerations may cast doubt on Alan Williams' conclusion, based on QALY calculations, that 'Heart transplantation does not seem to be a serious contender [for National Health Service funds]'.[14]

Save, perhaps, for the most intangible, all the broader types of welfarist consideration just surveyed have entered (in one centre or another) into decisions as to whom to select for some scarce life-saving procedure. So also have a number of other considerations having to do rather with some notion of *desert* (which will be sensitive to what one has done for society in the past, rather than what one is likely to do in the future). The Seattle 'God Committee' (officially, the Admissions and Policies Committee of the Seattle Artificial Kidney Center) is a case in point:

> In selecting those to receive treatment, the Committee . . . considered . . . age, sex, marital status, and number of dependants, income, net worth, psychological stability, and past performance and future potential.[15]

[13] *The Doctor's Dilemma,* op. cit., 84–85.

[14] Alan Williams, op. cit., 328.

[15] Calebresi and Bobbit, op. cit., 233 n.

Even from a welfarist perspective, however, it is far from clear that it is, all things considered, desirable that decisions about who should receive, e.g. renal dialysis, be made on this kind of basis. Consistent application of the broader sorts of criteria, especially the economic ones, is likely, in practice, to generate a heavy bias in favour of the white middle class, in a way that is potentially socially divisive.

(Actually, one finds just such a bias in the majority of British renal dialysis units. It is, for example, a fact in Britain, and a disturbing fact, that very few blacks receive renal dialysis, even though it is unlikely that racial discrimination, as such, has much to do with it—simply that the criteria employed tend *de facto* to exclude blacks. It seems unlikely, in fact, that this class/race/income bias has much to do even with doctors applying the kind of generalized quality of life considerations we have been surveying. What seems to be happening is that doctors prefer to give dialysis to those that their past experience suggests are most likely to do well on it. And statistically, educated middle class professionals are likely to do better than, say, unskilled labourers. They are, for example, likely to adhere more closely to the doctor's dietary and other instructions, and they tend to cope better with the psychological stress of being attached to a machine for a period of several hours two or three days a week.)

To the extent that such criteria are employed in a discretionary way at a microallocation level, a different kind of worry arises: is it really desirable that doctors should be allowed to sit in judgment on people's lives in the way that application of such a broad range of criteria implies? Do we want them to have that kind of power? Do we, in fact, want anyone to have that kind of power, even (or perhaps especially) the sort of predominantly lay panel set up in Seattle?[16] This sort of doubt may well be extended to QALY considerations too, if it is a matter of deciding, at a microallocation level, which of two rival contenders for some treatment is to get it. But the fact that QALYs are estimated mainly on the basis of quality of life as it is affected by a patient's overall health at any rate makes it something relatively objective, and something regarding which the doctor may at least claim some professional expertise—albeit that that expertise hardly extends to questions of the evaluative implications of these various health factors (the negative impact of which on the quality of people's lives there is evidence that doctors tend systematically to overestimate).[17]

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[16] The Committee's membership 'consisted of a lawyer, a minister, a housewife, a banker, a state government official, a labor leader, and a surgeon' assisted by 'a medical advisory panel made up of personnel associated with the kidney treatment program' (Calebresi and Bobbit, op. cit., 209 n.).

[17] Alan Williams, op. cit., 327.

IV

But I mention all these other sorts of welfarist consideration mainly to put them to one side. For what I really want to focus on here is the philosophically more fundamental objection that can be levelled against the QALY approach: namely that, precisely *because* it is uncompromisingly welfarist, it is in principle liable to result in forms of allocation that are *unjust* or *unfair.*

I shall not attempt here to define justice or unfairness. (All of the well-known philosophical theories of justice seem to me to be subject to decisive objections; and yet I have no alternative theory to offer.) Intuitively, however, justice has something to do with equality, and something also to do with giving appropriate weight to certain sorts of moral *claim.* From a commonsense point of view, the fact that A could confer some benefit, X, on B does not, as such, give B any claim upon A. Only if it is a particular kind of benefit, and A has a particular kind of responsibility for B, does it follow that A is even *prima facie* morally obliged to confer X upon B, or, consequently, that his refusal to do so constitutes any kind of injustice towards B. Now, continuing in this rather abstract vein, the claim that any patient would plausibly be thought to have on the health services (or on the state, in so far as it in turn is responsible for the health of its citizens) is a function not so much of the amount of *benefit* that the health services are in a position to confer, as of the person's health *needs* in relation to the services' capacity effectively to meet those needs.

One reason, then, why the QALY approach can strike one as intuitively unjust is that the principle 'To each according to what will generate the most QALYs' is potentially in conflict with the principle 'To each according to his need'. A patient suffering from end-stage renal failure may be said to *need* dialysis or a kidney transplant, just as a patient with an arthritic hip *needs* a hip replacement. But the first patient's need is clearly the greater. Following David Wiggins,[18] one can think of the degree to which a person, P, needs something, X, as a function of the degree to which his lack of X compromises P's capacity to flourish as a human being ('flourishing' now being, in British philosophical circles, the most favoured translation of Aristotle's *eudaimonia*). Someone, then, who will die without some particular treatment needs it in the strongest possible sense; for one cannot flourish at all if one is dead. Other things being equal, one would think, the greater the need the weightier the claim on available resources. But the QALY arithmetic is inherently insensitive to differences in degree

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[18] David Wiggins, 'Claims of Need', in Ted Honderich (ed.), *Morality and Objectivity* (London: Routledge & Kegan Paul, 1984), 149–202.

of need, except in so far as they happen to correlate with the degree of benefit per unit cost that treatment can confer. It attaches just as much value to the QALYs generated by treating those in a state of lesser need as it does to those generated by treating those in a state of greater need.

Indeed, it is arguable that some forms of medical treatment, whilst they confer a genuine benefit, do not minister to any *need,* as such, at all. I have in mind, for example, cosmetic surgery designed to remove normal wrinkles from the faces of middle-aged ladies. A model or an actress might, to be sure, need such an operation if she was to flourish, if the wrinkles compromised her ability to find employment (and so might a woman who was neurotically obsessed with her looks, if the operation could remove the obsession). But for the rest, the wrinkles do not compromise their capacity to flourish; it is merely that, with the operation, they may be enabled to flourish at a higher level. Such operations are, in short, a luxury. Suppose, then, as seems to me entirely possible, that some health care economist were able to show that facelifts, say, generated even more QALYs per unit cost than do hip-replacement operations. Would anyone really think that was sufficient reason for switching resources from hip replacements towards such cosmetic surgery?

Surely not. And if not, then by the same token it is far from clear that the QALY calculations cited by Williams constitute a sufficient reason for transferring resources from renal dialysis to hip replacements. One could plausibly argue that someone who will die, if he or she doesn't receive a certain form of treatment, has an intrinsically much stronger claim on available resources than someone whose life is not at stake, even if there is a sense in which greater aggregate benefit could be achieved by neglecting those whose life was threatened in favour of those suffering from reduced mobility or discomfort. And if so, then the greater moral weight that attaches to the claim could be held to outweigh the greater cost of the life-saving treatment per unit QALY generated.

Another respect in which allocation according to QALYs can result in modes of allocation which would intuitively seem unjust is that it will tend, in certain circumstances, to favour those who are (from a health point of view) already relatively fortunate over those who are less fortunate. This, indeed, was the force of the example cited earlier, where it was pointed out that the logic of QALYs would work to the disadvantage of elderly arthritic patients. But I want, for the moment, to set aside the age factor, since it raises important points of principle in its own right which are better dealt with separately. Let us simply suppose that there are two candidates for renal dialysis, and that the only relevant difference between them is that one is suffering from arthritis and the other is not. Assume that the quality of life of the arthritic patient is significantly impaired by his arthritis, but that there is no reason to suppose that it will in any way affect the chances of the dialysis proving successful. Assume, further, that both patients have an equally intense wish to go on living. Under these circumstances, the QALY approach says: give the dialysis to the patient who does not have arthritis. For every extra year of life we give him will correspond to a higher QALY value than a year given to the other.

There is a clear sense in which this is inequitable, for what it amounts to is taking the fact that someone is already unfortunate, in one respect, as a reason for visiting further misfortunes upon him (or at least denying him benefits). One might reasonably ask whether it was consistent with natural justice to allocate life-saving resources on the basis: 'From him who hath not shall be taken away even that which he hath', namely his life.

In such cases as this, I find myself in agreement with John Harris's assertion that allocation by QALYs 'amounts to unjust discrimination between individuals'. On the other hand, if doctors are faced with a choice of treating either of two patients, who are in an equivalent state of need, it does not seem to me unjust to choose to treat the patient for whom the treatment is more likely to prove successful. Nor does it seem to me unjust to prefer to treat the patient who can be treated at less cost, whether at the level of microallocation or macroallocation. Harris, by contrast, finds this an objectionable feature of the QALY approach:

> If a 'high priority health care activity is one where the cost-per-QALY is low and a low priority is one where cost-per-QALY is high' then people who just happen to have conditions which are relatively cheap to treat are always to be given priority over those who happen to have conditions which are relatively expensive to treat. This will inevitably involve not only a systematic pattern of disadvantage to particular groups of patients, or to people afflicted with particular diseases or conditions, but perhaps also a systematic preference for the survival of some kinds of patients at the expense of others. We usually think that justice requires that we do not allow certain sections of the community or certain types of individual to become the victims of systematic disadvantage . . .[19]

This line of reasoning seems to me fallacious. The principal basis of just dealing in a health care context is, surely, that people are thought of as having a claim on available health care resources that is proportional to their degree of need. (In the absence, that is, of other considerations

[19] John Harris, 'Rationing Life: Quality or Justice' (unpublished), paper presented to the British Medical Association Annual Scientific Meeting, Oxford, 10–12 April 1986, p. 9.

bearing upon what is just or fair.) From this point of view, if two patients (whether suffering from the same or different diseases) are equally in need of treatment, then they have the same claim on available resources. In the context of finite resources, this implies that if the resources required to treat them effectively are the same, neither has a better claim to being treated than the other (again, in the absence of other considerations). But if the resources required to treat the one are greater than those required to treat the other, it is perfectly compatible with recognizing that they have an equal claim on resources to say that the patient whose treatment requires a lesser expenditure of resources should be treated to the exclusion of the other.

Putting it schematically, suppose that the two patients, Andrew and Brian, in virtue of their health needs, were both thought to have a claim on medical resources of weight W, and that effective treatment of Andrew would call for an expenditure of resources X, whereas effective treatment of Brian would call for an expenditure of resources Y, where Y is less than X. (Any claim on resources is, after all, clearly going to be contingent on their effectiveness in ministering to the need that grounds the claim.) It is then entirely consistent with recognizing that they both have a prior claim of weight W to say that Brian should be treated in preference to Andrew. For what that implies is that, in the circumstances, a claim of weight W carries with it an entitlement to an expenditure of resources Y (conditional upon its being effective), but not to the larger expenditure of resources X. And that is surely perfectly reasonable. Indeed, to devote a disproportionate amount of one's health care resources to the treatment of people in a given state of need, when a lesser expenditure would enable one effectively to treat more people in an equivalent or greater state of need, would itself, from this point of view, be a violation of the principle that the claim on resources is proportional to need.

I do not, incidentally, think it is true, *absolutely in general,* that 'justice requires that we do not allow certain sections of the community to become the victims of systematic disadvantage'. If it were true, then justice would require, absurdly, that we not allow, say, more able people to get better jobs. What justice actually requires is that we do not discriminate between people on the basis of unjust criteria—race and sex being obvious cases in point. Thus if someone claims, as Harris does, that it is unjust to allocate health care on the basis of how great an expenditure of resources is required to minister effectively to a given need, the burden is on him to show that this *particular* criterion is unjust. But this he does not attempt to do; and the argument I have just presented seems to lead to quite the opposite conclusion, that it is perfectly just. This is not to deny, of course, that it is thoroughly bad luck if someone finds himself suffering from a condition the treatment for which is just too expensive to constitute a justifiable use of limited health care resources. But bad luck is not, *ipso facto,* injustice.

I alluded, in passing, to 'other considerations' that might be thought relevant to justice. Given two people who are equally in need of a given form of treatment, some would think it morally appropriate to take into account the fact that one of them has, through irresponsible behaviour, brought his condition upon himself. An example which featured in a recent television programme on the allocation of renal dialysis[20] was that of a patient suffering from renal failure consequent upon drug abuse (though it should have been pointed out, on this programme, that a history of drug abuse may, for purely medical reasons, cause difficulties when it comes to dialysis). For my own part, I am somewhat sceptical about the claim that *justice* requires that one should be sensitive to this kind of consideration. And this is because I am sceptical about free will. I am personally inclined to think that, in an important sense, we are all of us victims of our genetic inheritance, upbringing and so forth, and that it is not true that people who bring certain kinds of health care need on themselves—e.g. by driving dangerously, overeating, smoking or abusing drugs or alcohol—really *could,* in the final analysis, have acted any differently. (That said, I have heard it argued that there might be good welfarist reasons for according the claims of such people on health care resources a relatively low priority, if the fact were to be widely publicized and could act as an effective deterrent to such irresponsible behaviour. But I doubt whether it would. Someone who is undeterred by the prospect of seriously damaging his health is hardly likely, in my opinion, to be deterred by the prospect of less than ideal health care thereafter. An alternative and more promising proposal might be to give people some kind of tax incentive towards healthy living—say, in a British context, by making National Insurance payments depend in some degree on doctor's reports, so that someone who was overweight or who smoked, for example, would find himself paying more. But such a scheme might prove, in practice, very difficult to administer satisfactorily.)

A second point on which I find myself in disagreement with Harris concerns the relevance of *age* to allocation questions. Harris[21] maintains that it is *ageist* to take the fact that one of two rival contenders for renal dialysis, say, is younger as a reason for preferring to treat him, ageism, here, meaning wilful discrimination on the basis of age, parallel to

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[20] In the *Doctor's Dilemma* series, Granada Television, 1984.

[21] Harris, op. cit., 8. This line of thought is developed at greater length in his *The Value of Life: An Introduction to Medical Ethics* (London: Routledge & Kegan Paul, 1985), Ch. 5.

racism, sexism and, most recently, speciesism (taking the fact that an animal does not belong to the human species as a reason for saying that its suffering, say, matters less than equivalent suffering in the case of a human being). Now it goes without saying that some ways of taking someone's age into account, whether in a health care context or elsewhere, would be unjust. But I do not think it is unjust to allocate life-extending treatment on the basis that the younger one is, the weightier, other things being equal, is one's claim upon available resources.

The reason I say this is that I am impressed, as Harris is not, by what is commonly referred to as the 'fair innings argument'. The thought here, which seems to me absolutely correct, is that an older person seeking dialysis, for example, has already by definition lived for longer than a younger person. To treat the older person, letting the younger person die, would thus be inherently inequitable in terms of years of life lived: the younger person would get no more years than the relatively few he has already had, whereas the older person, who has already had more than the younger person, will get several years more.

Of course, this argument only works if one takes seriously the identity of persons over time. If one does not, then one can mount a counter-argument parallel to that which led us to the conclusion that it is inequitable to take the fact that someone has arthritis, for example, as a contraindication, in a situation of scarcity, to providing him with life-extending treatment. 'It is bad enough being old', someone might argue. 'To cite that as a reason for denying life-saving measures is to take the fact that one is already unfortunate in one respect as a reason for imposing yet a further misfortune, namely death. How can that be fair?' Well, quite easily; it is fair, inasmuch as the person referred to has already had a reasonably long life, longer, anyway, than that of rival contenders for the treatment. Fairness must be assessed on the basis of someone's life as a whole, unless one thinks of each 'time-slice' of a person as an independent contender for available resources, which would seem to me perverse. (But then I am not a sceptic about personal identity. Someone who took a more sceptical position than I, such as that defended by Derek Parfit in his influential *Reasons and Persons,*[22] might well be disposed to find great merit in the counter-argument to the fair innings argument that I have just cited.)

I mentioned earlier the fact that, from a welfarist perspective, it would be appropriate to take into consideration whether a patient had dependants, and if so how many and of what age—something that is not taken into account in a QALY calculation. How does this criterion look

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[22] Derek Parfit, *Reasons and Persons* (Oxford University Press, 1984), Part III.

from the standpoint of justice? Well it depends, it seems to me, on the precise grounds on which the interests of dependants are included in the equation. The central principle of justice that is operative here, I have been suggesting, is that one's claim on resources is proportional to one's need (in the absence of other factors). Now such a principle not only permits but actually requires one to take dependants into account, to the extent that these dependants themselves have a stake in the life or health of the patient *that itself amounts to a need,* in the stronge sense of that term. What one must ask, then, is whether the death or continued ill-health of the patient compromises the capacity of these dependants to flourish as human beings. If it does, then the health care needs of the patient are, in an extended sense, their health care needs too, and should be taken into account as such. Under such circumstances one may favour a mother with young children over a single person in an equivalent state of need, not because she herself has a greater claim on health care resources than does the single person, but because her children have, in virtue of their own need of the mother, claims in their own right—claims which can only be satisfied (or at least which can best be satisfied) through treating her.

Both here and as regards whether one should take age into account, it therefore seems to me that welfarist considerations, on the one hand, and considerations having to do with justice, on the other, will tend to converge on the same conclusion. (QALY calculations, as we have seen, tend statistically to favour the young for life-extending treatment, on grounds of life expectancy, quality of life, as gauged in terms of distress and disability, and also, in the case of renal dialysis, on the basis of the prospects for an eventual transplant.) Here the conclusions may be 'robust' in a new, wider sense: they may be invariant with respect to variations in one's moral assumptions, whether uncompromisingly welfarist or highly sensitive to considerations of justice.

But I see no particular reason to suppose that in general one will find any such convergence between justice and welfare (though there are many philosophers who argue that our intuitions about what is just are likely in practice to converge with what welfarism would enjoin, when we take sufficiently many factors into account in our welfarist calculations, or, like Richard Hare, that our intuitions about what is just are intuitions that it is, by and large, best from a welfarist point of view for people to have and act upon).[23] What then, since I have argued that any sane moral theory must include a welfarist element, should happen

[23] Hare's theory was originally put forward in R. M. Hare, 'Ethical Theory and Utilitarianism', in H. D. Lewis (ed.), *Contemporary Moral Philosophy 4* (London: Allen and Unwin, 1976); it is developed in greater detail in his *Moral Thinking* (Oxford University Press, 1981).

when justice and welfare come into conflict with each other, as I have argued that they do, in many QALY calculations? To give a wholly general answer to this question is as difficult as giving a theory of justice in the first place. But, at the level of moral phenomenology, it would seem that, over a considerable middle range of cases, where the cost in welfarist terms of giving priority to considerations of justice is not that enormous, we think it morally appropriate to favour justice. Indeed, one could view justice as *constraining* one's pursuit of welfarist aims: it is morally legitimate, indeed laudable, to aim for greater aggregate benefit, *provided* one acts justly in the pursuit of that aim.

One logical mechanism whereby justice can thus constrain welfarism may be via Joseph Raz's interesting concept of *exclusionary reasons.* An exclusionary reason is a reason for *not* taking something else as a reason. For example, justice gives the judge in a court of law a reason for not taking as a reason for giving a lenient sentence the fact that the accused is an old friend. Indeed, the image of justice as standing blindfold is a perfect symbolic embodiment of this notion of exclusionary reasons. Now in the context of the allocation of scarce lifesaving therapy, our earlier arguments might suggest that justice should be blind, for example, to the patient's quality of life, in respects that have nothing to do with the likely effectiveness of the treatment or the patient's wish to go on living.

This notion of justice as constraining welfarism constitutes the element of truth in John Rawls' claim that justice should be given what he calls *lexical priority* over other values, such as efficiency,[24] by which he means that the demands of justice have to be met before one starts discriminating amongst different policies or courses of action on other grounds: any policy or course of action which violates justice is excluded at the outset. But that, whilst it may be the right way to look at matters in a middle range of cases, becomes grossly implausible if insisted upon right across the board. It is moral fanaticism to say, with William Watson, 'Fiat justitia et ruant coeli' (Let justice be done though the heavens fall) or with the Emperor Ferdinand I, 'Fiat justitia, et pereat mundi' (Let justice be done, though the world perish). Whilst differences in quality of life should perhaps, in the name of justice, be ignored over a large middle range of cases, when allocating scarce resources, there comes a point where differences in prospective distress and disability are so great that it would be morally irresponsible not to take them into account, on welfarist grounds. And of course one ought, by the logic of what I have been saying, to take such factors into account when choosing amongst policies or courses of action which are none of them unjust. What I have been proposing is a pluralistic scheme of

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[24] John Rawls, *A Theory of Justice* (Oxford University Press, 1973), para. 8.

values in which welfare is one amongst a number of elements, which will also include justice, autonomy, and no doubt other things too. We should not let enthusiasm for QALYs blind us to these other values, nor let the fact that unconstrained maximization of QALYs may be a recipe for injustice blind us to the crucial importance of the welfarist considerations that QALY calculations embody. The allocation of scarce medical resources is an area where rationality is sorely called for, where we urgently need to examine our priorities in the light of argument and evidence of their relative efficacy. As a contribution to this task—but only as a contribution, not the last word on allocation matters—QALYs are greatly to be welcomed.

Postscript 1987[25]

Since writing this article, I have come to think (partly as a result of some very stimulating conversations with John Broome) that what I say in response to John Harris's claims needs to be amended. Harris, as we have seen, argues that a policy of thoroughgoing QALY maximization is ageist, and to that extent unjust. My response in the text was to argue that this is not unjust, and that, from the standpoint of justice, we ought, other things being equal, to favour younger patients in the allocation of scarce life-saving resources. What I should now argue is that Harris is mistaken in thinking that the QALY approach is ageist. For it is not true that QALY maximization involves discriminating against older patients as such; what it discriminates against are those with relatively low life expectancy, given that that they receive the treatment. The situation is parallel to that of selecting amongst applicants for a job that calls for a high degree of physical strength. In such circumstances, men would be most likely to be chosen in preference to women; but that would not be sexist, provided that weaker men were not chosen in preference to demonstratively stronger women. Clearly, the QALY approach is not committed to selecting younger people in preference to older people that demonstrably have a higher post-treatment life expectancy. But that very fact now seems to me to be an objection to unconstrained QALY maximization. For if, as I have been arguing, the fair innings argument is sound, then one ought, in the name of fairness, to prefer a younger over an older patient, for life-saving treatment, even if the post-treatment life-expectancy of the younger patient is no greater than that of the older patient. As I now see

[25] The preceding text appears originally in French in the *Revue de Métaphysique et de Morale*, No. 3/1987, 307–328. The postscript which follows has been added for this volume.

it, what is objectionable, here, about unconstrained QALY maximization, is not that it involves discriminating on the basis of age, but, on the contrary, that it fails to take age into account in circumstances where, in fairness, it ought to do so. It fails to be ageist when it should be, rather than being ageist when it should not.

The second point involves Harris's claim that it is unfair, when faced with limited resources, to favour patients that can be treated at less cost. In the article I argued that this was not unfair to the patients who needed relatively costly treatment; but merely a case of bad luck. Now, however, I am inclined to think that this is, after all, unfair, but that to treat a smaller number of people at greater cost, at the expense of failing to treat a larger number of equally needy patients, would be more unfair still. Suppose Tom, Dick and Harriet are in a state of equal need, and that for each of their conditions there exists a unique corresponding treatment that will be wholly effective. However, Tom's treatment costs £6,000, whereas Dick's and Harriet's both cost £3,000. Suppose, further, that nothing useful can be done for these patients for any amounts less than these, and that there is only £6,000 in the kitty. Given that they are all equally needy, Tom, Dick and Harriet each have, *a priori*, an equal claim on available resources. But we cannot just split the money three ways, since £2,000 will not, for any of them, buy effective treatment. By treating Dick and Harriet, at the expense of Tom, we are, it seems to me, being unfair to Tom, since his need is the same as that of Dick and Harriet, and yet he gets nothing. But in treating Tom, at the expense of Dick and Harriet, we would be being even more unfair, since then two of them would get nothing; and the numerical disparity between the actual allocation of resources and the unattainable ideal of £2,000 worth of effective treatment apiece, would be twice as great, in this case. The fairest thing we could do, in this situation, would be to have a weighted lottery, in which Tom was given a one-third chance of getting treated, at a cost of £6,000, while Dick and Harriet were given a two-thirds chance of being treated, at £3,000 apiece. For then the *expected* resource allocation, that is say the probability of getting treated multiplied by the cost, would be the same for all of them, namely £2,000, thus matching their equal need. But even that is not perfectly fair, since it ameliorates but does not eliminate the inevitable inequality of the final outcome.

Two final points. First, I quite deliberately say 'unfair' here, rather than 'unjust'. We are sometimes it seems to me, faced with situations in which whatever we do will result in an outcome that is, to some extent, unfair. But it strikes me as a bit odd to describe it as unjust. We might perhaps say that an outcome is perfectly just when it reduces unfairness to the absolute minimum that the situation allows. But anyway, a pattern of distribution of scarce medical resources that, other things being equal, will favour those who can be treated at less cost, is not perfectly just if, as I now believe, a weighted lorry would be fairer. Nevertheless, I should not advocate such a lottery. First, it would be an administrative nightmare. But secondly, it would be significantly less efficient at generating QALYs. Given that, in any case, considerations of justice have, to some extent, to be weighed against welfarist considerations, I would judge that favouring those who can be treated at less cost gives about the right weight to both.