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Valuing Health, Healthcare and Health Equality
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ABSTRACT

How should health services best be allocated between citizens in different health conditions and with different socio-economic characteristics? This note contrasts answers to this question based upon a utilitarian conception of the value of healthcare with those derivable from broader pluralist conceptions of value. It seeks to show that only the latter can do justice to our considered intuitions regarding social justice in healthcare allocation. Yet this conclusion should not inhibit use of a Cost Benefit Analytical framework, which can incorporate value pluralism.

Under a utilitarian interpretation of “benefit”, a skewing of the allocation of healthcare to favour the deprived is unlikely to be justified. An independent social justice objective is required. Furthermore, the implicit fungibility of all forms of health with other sources of utility is consistent neither with the importance that we accord to provision of health services nor with an objective to narrow specifically health inequalities.

An alternative understanding of the value of health services might view health not merely as a consumer good, but also as an “enabling condition” granting the capability to lead a life of value (in Amartya Sen’s terms). Procurement of healthcare to enhance capability is an expression of society’s respect for its members, and is of value as such. Similarly, procurement of health services that mitigate pain expresses society’s compassion. And an egalitarian bias in distribution of these services becomes an expression of society’s equal respect and equal compassion for all its members.

There are important methodological implications of these alternative understandings of the value of health and healthcare. Whereas conventional “willingness to pay” surveys could capture the benefits of pain alleviation, alternative methodologies are required to measure impacts upon capability and to gauge the value of healthcare as an expression of equal concern and respect.
How should health services best be allocated between citizens in different health conditions and with different socio-economic characteristics?

This question is of most policy relevance if the “should” employed is understood to encapsulate the community’s considered ethical judgments. Nevertheless I wish to argue that it can best be approached within the conceptual framework of Cost Benefit Analysis (CoBA), though only if an inclusive interpretation of “benefit” is employed, one that does not preclude non-utilitarian theories of value. This note defends the use of the CoBA framework (Section I), before going on to contrast answers derived from a utilitarian theory of value (Section II) with those based upon a broader conception of the value of healthcare (Section IV). Section III identifies the problems with the utilitarian theory in its application to the allocation of healthcare, focusing particularly upon the implicit fungibility of all forms of healthcare with the distribution of other benefits.

The alternative understanding of the value of health services discussed in Section IV builds upon Amartya Sen’s proposal to treat health as an enabling condition without which individuals’ ability to lead lives of value is compromised. Healthcare that enhances capability can then be understood as an appropriate expression of society’s respect for its members’ capacity to lead lives of value. Following Elizabeth Andersen’s axiology, such expression has intrinsic value over and above the particular value of a service to the recipient of care. Similarly, health services that mitigate suffering express society’s compassion. And an egalitarian bias in distribution of these services becomes an expression of the equality of society’s respect and of its compassion for all its members.

I conclude (Section V) with a discussion of some methodological implications of this richer understanding of the value of health and healthcare. Tools for evaluating health impacts need to be designed to reflect the different aspects of value created by social delivery of healthcare. Whereas conventional “willingness to pay” surveys could capture the benefits of pain alleviation and the utility value of health gain, alternative methodologies are required to measure the full impact upon capability and to gauge the value of healthcare as an expression of equal concern and respect.

I - Cost Benefit Analysis as a Neutral Framework

According to the tenets of Cost Benefit Analysis (CoBA), optimisation of the health budget requires that it be allocated across the various health services so as to maximise the benefit arising. This can be achieved by ordering all the potential interventions in terms of the benefit arising per pound, and delivering all those that can be afforded within the budget, starting with those that give rise to the greatest benefit per pound.

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When comparing different health services, indivisibilities aside, the result of this approach is that the benefit per pound accruing to the person receiving the least benefit per pound will be the same for all services. So, the marginal hip replacement will confer the same benefit per pound as the marginal treatment for schizophrenia, or the marginal breast screening. (For were this condition to fail, transferring resources between services could increase aggregate benefit.)

Further, the approach should apply across different programmes: the benefit per pound of the marginal hip replacement should also be the same as that of the marginal adult education enrolment, and both should equal the benefit per pound of the marginal environmental project – etc. etc.

This generality is the essence and the power of CoBA. It allows CoBA to inform not only the allocation but also the relative size of the health budget. And if the value of any marginal intervention can be expressed in monetary terms and if account is taken of the wider costs and benefits of taxation, then the absolute size of the health budget can also be derived.

In order to achieve comprehensive scope, the CoBA framework for assessing welfare options must capture all aspects of the value of healthcare provision (and of other services), including its equity, and be adapted to the different approaches required for their valuation. This can be achieved by understanding “net benefit” to embrace not only the personal utility of the beneficiaries but also social value in its widest sense (i.e. “value” tout court). To be consistent with this, the social value function (SVF) that underpins policy analysis must employ an inclusive conception of value. In determining the potential value of a proposed policy, an inclusive function can take account of anything that is of ethical significance, including both the value of the actions that implement it and the value of the resulting state of affairs.

For example, considerations of natural justice imply that a judicial conviction has more value simply because the convicted man is guilty of the crime of which he is accused even where total utility would have been as great had an innocent man been convicted in his place. Using an inclusive SVF, policy evaluation would therefore assign value to the accuracy of the criminal justice system independently of utility impacts. The system’s accuracy is a value that should be assessed alongside, for example, the cost of crime in assessing policy options. Similarly, an inclusive SVF would attribute more value to a state of affairs in which citizens have more autonomy, even if utility or achievement more generally is no greater.

Nevertheless, although Cost Benefit Analysis does not require it of them, practising economists have tended to assume a narrowly defined social value function, based simply upon personal utility or welfare (often implicitly defined as an attribute of mental states revealed in market preferences and contingent valuations). The social value function is consequently known as a “social welfare function”. Faced with policy objectives that do not fit well into this framework, economists tend either to attempt a procrustean reinterpretation of the objectives, or to view the policy desiderata as external constraints outside the scope of analysis. Both approaches have unfortunate consequences.

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3 By insisting upon the commensurability of all aspects of value within a social value function, including liberty and autonomy, I am denying absolute priority of the right over the good. See discussion in Franklin 2000, Chapter 5.
For example, suppose that to fit environmental assessment within a utilitarian social welfare function, the value of the existence of a site of natural beauty is attributed to the utility arising from individuals’ knowledge of its existence. This involves a distortion of the nature of environmental value with practical consequences: on this view there would be no loss if a site of natural beauty were destroyed without anyone knowing of it. Alternatively, if the need to preserve a site is seen as the result of democratic or judicial process, beyond the scope of Cost Benefit Analysis, environmental policies may escape rigorous evaluation.

Employment of a more inclusive SVF requires careful elicitation of a consensus regarding both the aspects of value to be captured and their measurement. The complexity of this work, and the threat of arbitrariness in calibrating different aspects of value against each other, may be one reason why economists have eschewed it in favour of the more familiar utilitarian approach to CoBA. However, it is better to be roughly right than precisely wrong: if utilitarian approaches to value are biased, then the nettle of broader pluralistic concepts of value must be grasped. The next sections attempt to demonstrate with respect to health care the shortcomings of the narrowly utilitarian approach (sections II and III) and the nature and practical implications of an alternative approach that would better fit with our considered intuitions.

II - The Utilitarian Approach: Healthcare as a Consumer Service

In order to focus upon the principles that should guide its allocation independently of financial entitlements, assume that it is already determined that healthcare is to be publicly funded. Assume further that individuals reveal their health status and that clinicians and health experts assess the likely impact of health treatments on different patients, all without guile or bias. The public sector is then confronted with the need to allocate a (fixed) budget across an array of potential beneficiaries of health care, to whom it can provide a variety of health interventions with known expected impact upon their health.

Risk and time complicate the optimisation problem – it matters to people whether the statistically expected benefit from an intervention is certain, and it matters to them when the benefit will start to accrue. Assume (for simplicity) risk neutrality and a zero discount rate (or, equivalently, that all interventions have immediate and certain impact).

Optimisation of health services allocation can now be derived from the general principles of CoBA. Clearly, if analysis is limited to considerations of individual utility, CoBA principles can be adapted by substituting “net personal utility” for “net benefit”. Thus the objective is to maximise net utility generated by the health budget. This can be achieved by ordering all the potential health interventions in terms of the net personal utility arising per pound, and delivering all those that can be afforded within the budget, starting with those that give rise to the greatest net personal utility per pound.

How are we to determine the expected utility of a health intervention for a potential beneficiary? In principle, one could apply the standards techniques of welfare economics to each case, for convenience using money as the numeraire: we could estimate how much this particular individual would be willing to pay to receive this particular intervention. Data on the individual’s revealed preferences for lifestyles or services that improve health quality could be combined with survey evidence to determine what quantity of other goods with
market prices, valued in pounds, are of the same value to this individual as this health intervention.

The value that an individual would put on an intervention in pounds would reflect its utility relative to other uses of that individual’s marginal income. However, to render the utility derived by one person from marginal income comparable with that of another, allowance must be made for the diminishing marginal utility of additional consumption (DMUC). The empirical evidence suggests that as income is doubled, the marginal value of consumption to individuals is halved: the utility of a marginal pound is inversely proportional to the income of the recipient. In other words, a health intervention valued at £1000 by someone earning £10,000 a year will yield twice the utility of a health intervention valued at £1000 by a person earning £20,000 per annum. This DMUC adjustment is straightforward to apply (see HMT 2003 Annex 5).

Separate estimation for each individual of the sum that she would be willing to pay for each health intervention, the sum that (with DMUC adjustment) gives its value in the CoBA, is clearly impractical. A short cut is required. One approach would be to sample willingness to pay across a range of individuals from different backgrounds, and then to construct socio-economic groups that appear to have relatively homogeneous utility functions. Health service allocation decisions could thus respect the differing marginal value placed on health services by people in different groups.

Assume that health is a luxury good, for which demand rises disproportionately with income. On this assumption, wealthier people are typically willing to devote a greater proportion of their income for the same health gain. In which case, even after making a DMUC adjustment, it would be correct to assign a higher utility to a marginal health intervention for someone on a higher income.

To count a health intervention for a poor patient as less valuable than the same intervention for someone on average income would (on any plausible interpretation of need) break a cardinal principle of health care provision – equal care for those in equal need. This principle

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4 I set aside scruples regarding interpersonal comparisons of utility following Sen’s robust dismissal (“If that position were accepted, then the statement that person A is happier than person B would be nonsensical …”, Sen 1987, p.31). More demanding is the requirement that utility can be rendered onto a common ratio scale. The same utility is assumed to be derived by each person from similar resource use (measured in a common currency at market prices), in the absence of confounding evidence. Hence, the fact that individuals derive less and less utility from marginal increases in consumption as their consumption level increases justifies a corresponding assumption that marginal utility gains from increases in consumption are lower for different people enjoying higher initial levels of consumption.

5 Formally, this relationship between utility and consumption implies an elasticity of the marginal utility of consumption equal to 1. *Welfare Weights*, by Frank Cowell and Karen Gardiner (1999) (also published as OFT Research Paper 20 in February 2000) reviews the empirical evidence for the value of this parameter from studies of the inter-temporal substitution elasticity. They conclude: “most [studies] imply values of the elasticity of marginal utility of just below or just above one.” Reassuringly, this result is broadly consistent with Kula 1997 (pp 94-96) who derives the elasticity of the marginal utility of consumption using an alternative methodology: as the ratio of the income elasticity of the food demand function to its compensated price elasticity.

6 Di Matteo (2003) examines data sets for the United States (by state), Canada (by province), and the OECD (by country) using flexible estimation techniques and concludes that spending on health care is a luxury good – it is income elastic – but only at lower income levels. However, the argument in the text does not rely upon this result: it is intended to demonstrate only that fairness in distribution of healthcare services is understood to be independent of its relative impact upon utility or preference satisfaction.

7 See Culyer (1995) for a discussion of the range of interpretations of this slippery concept.
embody a widely shared view of one of the characteristics of a just health care delivery system. This result therefore represents a *reductio ad absurdum* of a pure utilitarian approach to optimum allocation of health services.

By contrast, conventional ethical thinking reflected in current practice in the health economics literature, and indeed in policy, is to assume that equal benefit accrues from the delivery of like health services to all individuals of similar age and initial health status. The health domain is thus assumed to be isolated from trade-offs at different rates of substitution with other goods that individuals might enjoy.

The way this approach to the value of health and healthcare is typically manifest is through the use of non-monetary standard unit of health-gain (as a result of an intervention) that is assumed to be of equal value whoever receives it. There are rival systems for measuring this gain, and there is much dispute as to how or whether to adjust for age or disadvantage. However, these issues can be set aside for the purposes of the moment.

One common measure of health status is expected Quality Adjusted Life Years (QALYs) – that is the person’s life expectancy adjusted to reflect expected health-determined quality of life. The quality-adjustment appropriate for any particular ailment or handicap is determined by empirical investigations of a representative sample’s willingness to trade either length of life, or risk of mortality for restoration to normal health. (In section V, I discuss the appropriateness of this valuation method.) For each intervention, expert opinion and empirical research provides an expected impact upon the health status of individuals, according to their condition. This is expressed as the number of QALYs that that individual would gain as a consequence of the intervention.

The expected QALY gain is interpreted as a measure of the benefit arising from an intervention. Optimisation can then proceed by establishing, implicitly or explicitly, a maximum cost per QALY that can be afforded within the healthcare budget, and delivering all health services that provide QALYs up to that unit cost.

It is obvious (not least from the range of responses typical in the surveys underpinning QALY estimation) that the utility derivable from a particular QALY improvement varies between individuals. Under a utilitarian conception of the value of health, it would be correct to adjust for these differences, notwithstanding that a proper adjustment might lead to more care being devoted to wealthier patients. An obvious interpretation of the assumption that QALYs confer like benefit to different socio-economic groups is that health gain is being valued on some basis other than utility. Such an alternative basis will be explored in Section IV.

However, it is possible to interpret current practice as expressing a utilitarian valuation adjusted to secure social justice. Utilitarian cost benefit analysis can be extended minimally to allow for a social value function that attributes additional social utility to reductions in inequality in personal utility. Such a social value function would be within the “welfarist” camp, in that it would take as its arguments only personal utility, but it could for example assign declining weight to the utility gains of higher income groups, or attach a higher weight to utility gains for the worst off.9

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9 This is effectively the implication of Cowell and Gardiner (1999)’s decision to use a parameter of 1.2-1.4 as the elasticity of the marginal social utility of consumption, rather than the 1.0 that they found in empirical work (see
Indeed, a policy to reduce inequalities might be justified pragmatically even with aggregate utility as a social welfare function on the grounds that present delivery of healthcare is biased against those who are most deprived either through failures in resource allocation or in health delivery.\(^{10}\) In that case the most efficient way to raise aggregate utility may be to adopt policies directing healthcare towards the poor.

Sometimes it appears that priority is to be given to the least healthy rather than those with least utility.\(^{11}\) However, even this approach might be justified pragmatically within a utilitarian framework on the basis of two assumptions: that overall and health deprivation are correlated, and that it is easier to discriminate in favour of those with worse health than in favour of those with more general deprivation. Both are plausible.\(^{12}\) Hence, it is possible to justify current practice in the analysis of health policy as a pragmatic adaptation of a fundamentally utilitarian approach to the allocation problem.

Nevertheless, it remains implausible that the utilitarian approach well captures our considered judgments regarding the value of the delivery of health services. It is not plausible that we would contemplate biasing health service delivery against those who value their own health little of in favour of the valetudinarian, even were this practicable. The next section sets this intuition in the context of other problems with the utilitarian approach.

### III – Problems with the Utilitarian Approach to the Value of Health Care

There are at least five reasons for questioning the utilitarian approach to healthcare allocation, even when enhanced by assignment of greater weight to those with less overall utility.

First, most critically, the theory assumes fungibility between health care services and other forms of utility enhancement. On this basis, we should be indifferent between providing someone with a health service and providing them with the same quantity of utility in another form. Hence, someone entitled to a hip replacement should also be entitled to receive the cost of the operation in cash if they so wish.

In fact we do not allow such choices. It is true that the reason for denying a patient the right to take the cash alternative could be a fear that they will turn up tomorrow in greater pain requesting the hip replacement. Yet, the same choice could be offered to someone entitled to receive anaesthesia prior to an operation. Would such a person be entitled to ask for the anaesthetist’s fee if they thought they would receive sufficient utility from this sum to compensate them for the pain of enduring an operation without anaesthetic? To deny such a

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footnote 4). They derive this elasticity from the progressiveness of the tax schedule, (which must reflect judgments of social fairness made by successive governments).

9 Cf. The British Government’s aim of “improving the lives of everyone, especially the worst off” (Dept of Health 1999)

10 The various possible causes of health inequality, and policy consequences given the objective to reduce avoidable inequalities, are discussed in Hauck et al (2002).

11 E.g. The British Government’s aim to “reduce inequalities in health outcomes” (H M Treasury 2002)

12 Some government pronouncements on the health inequality agenda do imply that it is the overall (rather than specifically the health) disadvantage of those suffering from ill-health that is of concern: “Health inequality is widespread: the most disadvantaged have suffered most from poor health.” (Dept of Health 1999; emphasis in original.)
choice is to impute to the provision of health services a value that is not determined by the patient’s individual utility function.

A similar intuition inhibits us from contemplating monetary compensation to offset persistent health inequalities. Suppose that it is proposed to target health promotion upon the least well off in order to reduce their tendency to heart disease. Suppose further that distributing the funds in more generous income support would more effectively increase the utility of these individuals notwithstanding that there would be no improvement in their health. Reluctance to abandon the goal of reducing health inequality implies a specific concern for health equality over and above concern for equality of utility.

Second, the subjectivity of healthcare valuation derivable from the utility approach accords ill with our intuitive grasp of what is of value in health care. In market economics, benefits are defined by *ex ante* willingness to pay for a service. In welfare economics, this willingness to pay is approximated using revealed preference or contingent valuation techniques.¹³ Health valuations are conducted by assessing willingness to pay to shift from one health state to another, or willingness to trade one health state for another (whether in terms of money or, as in the QALY estimation literature, in terms of life years or life risk). However, the valuation of a health gain in terms of other goods typically changes as a result of treatment. Illness may colour one’s outlook adversely, or one may become reconciled to one’s illness or disability. And valuation varies dramatically interpersonally – variation to which we are reluctant to pay attention in practice (as discussed in Section II) – suggesting an objective aspect to the value of, say, restoration of sight, that is stipulated to be invariant between persons.

There is also a lack of clarity surrounding the impact upon third persons’ utility (see Dolan (2000). Respondents to surveys may or may not take account of the impact of their illness upon those who care about them. From a strict utilitarian perspective such impacts should be included. Yet we would, I hope, be scandalised by a proposal to give less care to the childless orphan on that account.

Third, public health service provision often aims to distinguish need from want, focusing upon the former at the expense of the latter. Hence, for example, healthcare rationing is often biased against the use of public funds to provide cosmetic surgery. Yet this bias does not appear to be based upon a critical assessment of the relative utility to patients of such services compared to those deemed by clinicians to be genuinely needed.

Fourth, the rhetoric of health care discourse is inconsistent with reckoning of health as but one means of increasing utility. For example, although some UK government pronouncements suggest that concern with health inequality is merely an expression of concern with utility deprivation, others suggest otherwise:

“We believe that good health, like good education, should be within reach of all. …Better health is vital in itself, leading directly to longer, more active and more fulfilled lives.” (Dept of Health 1999)).

Finally, the utilitarian approach is based upon an ethical theory that has become widely discredited because of its discord with entrenched ethical intuitions and for the narrowness of its conception of the human good. Utilitarianism has clear practical attractions to the

economist, for it enables value to be captured in a single metric (so that a balance between, for example, different people’s utility can be struck). But that does not seem an adequate reason for favouring it over more plausible ethical frameworks, especially if alternatives can be developed that can also handle inter-value trade-offs within CoBA.

IV - An Alternative Understanding of the Value of Health Services

Why do we care about our health? In the utilitarian framework, health is valued because it tends to reduce pain and discomfort and to increase pleasure, the capacity for pleasure, and other forms of utility. In which case, it is rational to forgo an improvement to one’s health wherever resources can be devoted in some other way more effectively to increase aggregate utility.

Suppose we entertain a richer notion of the good life, wherein (as even J S Mill conceded) the pleasures of the intellect are rated above those of the body, or wherein action and achievement are rated above passive enjoyment. In this case, our valuation of health will similarly be extended: we will value health in more general terms for the capacity it affords us to pursue lives of value. Applying such a broad conception of the good life, Amartya Sen identifies good health as one of the “enabling conditions” that allow positive achievement. (Sen 1999, p.5)

This is not to deny that good health confers straightforward utilitarian advantage – ill health is uncomfortable and can be painful. The point here is that it is also debilitating. Hence, we should view healthcare that restores health not merely as a consumer service generating utility but also as an investment in human productive capital. Health services should therefore be valued on two dimensions:

- the utility dimension: preventing, alleviating or removing pain and suffering
- the capability dimension: contributing to “individual capabilities to do things that a person has reason to value” (Sen 1992, p.56).

The latter dimension introduces objectivity into the assessment of the value of health, and helps to explain our inclination to value like enhancement of capability uniformly across individuals (whether they want it or not).

Our conception of social justice can be refined to match. In a utilitarian framework extended to embrace egalitarian objectives, reductions in health inequality are, correspondingly, valued insofar as they reduce inequality in utility. In a Sennian account of the value of health, reductions in inequality of capability would be of independent importance: the objective could

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14 Even within a utilitarian framework, it would be appropriate to consider healthcare as an investment good to the extent that it yields enduring improvement in the capacity to derive utility.

15 I employ the Sennian locution of “capability” notwithstanding Cohen’s (1993) objection that it excludes certain dimensions included in his “midfare” concept. I suggest that Sen deliberately uses a term with normative overtones that justifies, however loosely, positive valuation of the particular agency and wellbeing “functionings” that he wishes to capture.

16 Sen understands capability to embrace both “ability to do valuable acts” and “to reach valuable states of being” (Sen 1993). The latter include states yielding personal utility. My suggestion is therefore that we value health services both for the direct benefits to utility and for the gain to capability both to achieve and to enjoy.

17 Each of these dimensions should properly include impacts upon the pain/suffering and the capability to do things of value of carers, dependants and others, as well as of patients.
be to reduce inequalities both in utility and in capability, with appropriate (possibly asymmetric and/or non-linear) weights assigned to each dimension.\textsuperscript{18}

The introduction of diverse dimensions of value in healthcare complicates the technical challenge of valuation employing a single metric, as required by Cost Benefit Analysis. To this issue I return in the next section. In the meantime it is worth noting that the required commensurability of the two dimensions is often evident in individuals’ willingness to endure pain and discomfort in order to maintain function. Our challenge will be to introduce an objective anchor into a trade-off that is susceptible to subjective biases. We will see that the introduction of the dimension of capability into our assessment of the value of health services helps to explain our reluctance to allow individuals to trade cash for health improvement: individuals are not reliable assessors of the value of capability improvement relative to pain.

Yet there is more to societal reluctance to substitute cash for health services than mere distrust of personal valuation. Suppose that the social value of a particular intervention, perhaps one that mitigates pain, is no different from the personal valuation. If the individual says that she would nevertheless prefer to receive cash (perhaps because she is on less than median income, so that cash will be worth more to her than it is properly valued in the health budget given the DMUC), I suggest that we would still be loath to give her the cash. The third dimension of value, which helps to explain our reluctance to trade health benefits for monetary benefits, is the value created by the delivery of care as an expression of societal concern – concern for individuals and concern for social fairness.

The method of delivery affects the value of the service delivered. Procurement of health services by the public sector has value not merely for its impact upon the health of beneficiaries but because it is a tangible expression of society’s concern for its members.

According to Elizabeth Anderson (1993)’s axiology, value is multi-dimensional, inhering in individuals, actions, and relationships. And one way in which actions can be valuable is in so far as they express appropriate attitudes towards their objects (whether persons, objects or causes), creating an appropriate relationship of care. Based upon such a theory, we might understand healthcare to be of value not only in the conferral of utility or capability to its beneficiaries but also as an expression of care.

Not every bestowal of benefit is an expression of care. Healthcare expresses care in a way that payment of monetary compensation does not. Herein lies a deeper explanation for our unwillingness to allow someone to opt for the cash rather than an operation or pain relief. Indeed, we might think that even to offer such a substitution would be to undermine the appropriate expression of care. Consider a parent’s gift to a child. What form of gift expresses most care? If a parent believes that a certain form of life is valuable, then her care is likely to be expressed in gifts that support the child in pursuing that form of life. Or if the parent is

\textsuperscript{18} There is an instructive match between these two dimensions of the value of care and the competing egalitarian objectives of equality of outcome and equality of opportunity, when viewed from the Sennian perspective of a twofold utility/agency understanding of the nature of the value potentially inhering in individual lives. Priority for those in the most pain reduces inequality of outcome in the utility dimension of value; but the agency dimension of value is of course not susceptible to intervention to reduce inequality of outcome (as achievement must be through personal effort). On the other hand, reduction in inequality of capability serves to enhance equality of opportunity both to achieve and to enjoy.
concerned only that their child should lead a life of value of its own choosing, then a gift expressing care will be one that has a focus upon expansion of the child’s capability. A gift of drugs or cigarettes would express disregard for the child; a gift of money might express indifference to the child’s life achievement.

However, if a child is in pain, the most urgent desire of the caring parent is to mitigate that dis-ease. (It is worth noting in passing that there is an important distinction within the metric of pure pleasure and pain: the relief of pain by a parent is more valued and more missed in its absence than the provision by the parent of a pleasure of equal utility.\textsuperscript{19})

Such expressions of parental care constitute a bond of affection that has intrinsic value. We may reckon that the world is a better place in which a child is encouraged to fulfil her potential, or in which her pain is relieved, through the care bestowed by the parent than if these same results had been achieved without such intentional agency.

Provision of social welfare in the form of health services partakes in this same value as an expression of society’s care for its members. Society’s care for its members is best expressed in ways consistent with society’s valuation of the way its members choose to live their lives, and with its core concern for the relief of suffering. Society thus considers that it is more appropriate to express care for its members in the delivery of certain health services – those enabling individual flourishing and relieving suffering. It counts as less valuable the expression of concern through the bestowal of high class hotel services in hospitals, or the provision of cosmetic surgery, notwithstanding that such services may sustain great increases in utility, as they provide neither relief of suffering nor capability enhancement. Such services can be left to market mechanisms (regulated to offset market failures).

Recognition of value created in the healing and caring relationship also explains the rule of rescue (otherwise viewed as anomalous\textsuperscript{20}): that is that the clinician has a peculiar duty to give succour to the person in front of her. To fail to give such succour expresses a disregard for this person; whereas to give it will not express a disregard for those anonymous others she might otherwise have treated more effectively.\textsuperscript{21}

More generally, procurement of healthcare that enhances capability can be understood as an appropriate expression of society’s respect for its members’ intrinsic potential to lead lives of value. And procurement of health services that mitigate suffering expresses society’s compassion or concern.

A determinedly egalitarian allocation of services that enhance capability and that mitigate suffering then becomes an expression (respectively) of society’s equal respect and equal concern for its citizens. Should health alone or wider welfare or capability come into view in expressing societal equal concern and respect? If we wish to give priority to those suffering most, should we take into account not just physical suffering but other forms of suffering?

\textsuperscript{19} Where equality of utility is demonstrated by the equal sum that the beneficiary would be willing to pay for the pleasure as she would pay for the relief of suffering, both from an impersonal source.

\textsuperscript{20} Williams and Cookson (2000) for example see the rule of rescue as lacking rational explanation, section 4.2.6.

\textsuperscript{21} The rule of rescue, and the value that it expresses, is ignored in Ronald Dworkin’s treatment of healthcare allocation (Dworkin 1993). He suggests that the level of treatment for different ailments should mimic the results of a hypothetical insurance market for payouts contingent upon different health states. The problem is that the value realised by society’s offering succour to the suffering will transcend anything that would be manifest in an insurance market. (This problem is too briefly dismissed in footnote 3 of Dworkin’s paper.)
Should we prioritise for pain relief those suffering from bereavement or from socio-economic disadvantage? Should the latter group as well as those with intellectual or physical disadvantage merit greater priority for treatments that enhance capability? After all, ethical arguments for alleviation of acute suffering or for raising the capability of each to some minimum capacity to lead a life of value are not health-specific. However, to give priority in these ways might introduce an unwelcome complexity and subjectivity into healthcare provision, subjectivity that itself has costs. There is independent merit in clear process equality in the allocation of care expressive of society’s respect and concern for its members. Those receiving less care will not feel slighted if they lose out through a process they can recognise as fair. This explains the greater reluctance of clinicians than of policy makers to implement positive discrimination. (See Sen 2002 and Williams 2003 for a discussion of this issue.) Nevertheless, at a policy level a bias in health services and health research in favour of the worst off, as assessed from a broad whole person rather than a narrow health perspective, appears justified as an expression of societal concern for social justice.

The parental analogy employed to illustrate the state’s concern for its citizens might be thought objectionable. Perhaps we do not want the state to express care; or perhaps we wish it to express care in ways that are truly indifferent as to our choices – even choices whether to use our life well or ill, and whether to endure pain. Yet our revealed determination to allocate healthcare in kind rather than allow conversion to cash suggests otherwise. Perhaps the better analogy might be with a concerned but not patronising friend rather than a parent in the role of the state. Is the good friend the one who exercises discretion in line with the other’s best interests or in line with their current desires?

There has been considerable reluctance within economics to take account of ethical values in the way here suggested. Welfare economists’ predilection for deriving values from personal preferences may reflect not only vestigial utilitarianism, but also the dominance of value subjectivism. This may manifest a resiling from the social engineering of the first half of the twentieth century – an attitude captured both in Isaiah Berlin’s warning lest too prescriptive an account of the human good leads us to constrain “negative liberty”, and in the opacity of John Rawls’ veil of ignorance to any views on the nature of the good. However, Amartya Sen’s work can be seen as a recognition that too studied an attempt to be neutral regarding the human good expresses not neutrality but callousness (if it involves for example accepting the low valuation that a deprived person might put on her own education). In any case, it is clear that a certain paternalism has never left the public sector’s evaluation of alternative policies. (A recent example is the adoption of a standard and relatively low rate of social time preference without regard to the personal discount rates of those affected by particular public policies.)

In sum, we have reason to value health both for the enabling impact it has upon our capability to lead lives of value, and for its impact upon utility. Furthermore, health services procured by the public sector have additional value in that they express society’s respect and concern for its citizens. This value is dependent upon the nature of the health services procured – and attaches to services to the extent that they enhance capability and mitigate pain and suffering (with other aspects of utility enhancement being less appropriate vehicles for expressing


\(^{23}\) See Rawls (1972)

Finally, egalitarian (or indeed prioritarian) societal objectives can also be expressed through differential allocation of health services to those most lacking in capability and to those in greatest suffering.

V - Methodological Implications

What follows from the multi-faceted nature of the value of health care? What emphatically does not follow is that we should eschew any attempt to translate the value of different interventions into monetary terms. Anderson does take the recognition of a plurality of types of value to imply a radical incommensurability – and particularly recoils from monetary valuation in cost benefit analysis. She argues that cost benefit analysis “fails to capture the ways people value goods outside of market contexts, which in principle cannot be measured by a cash value.” (Anderson 1993, p.210) However, this is a counsel of despair that is moreover inconsistent with the need to choose in public policy between different uses of tax payer’s money. Nor does it follow from Andersen’s axiology. To recognise that a certain value attaches to non-market transactions – for instance in that they allow expression of the concern of one agent for another more readily than do market transactions – is not to deny that there is limit to the resources that should be expended to secure this value. Similarly, to recognise social justice as a legitimate objective does not imply that it should be bought at any price. In both cases money is but a useful numeraire for describing what limit should be set upon the resources consumed to secure the value in question.

Rather, recognition of the multi-faceted nature of the value of health care implies that valuation techniques should also be multi-faceted. We need to consider separately how best to estimate each aspect of the value inhering in a particular health service delivered in a particular way. The challenge is to create mechanisms that can capture the different dimensions of the value of health services and incorporate them in public policy decisions.

Current standard methodology in health economics attempts to evaluate the benefit from a change in health state overall. For example, the EQ5D questionnaire elicits from respondents before and after treatment an assessment of their health state on five dimensions: mobility (problems with walking about), self care (washing or dressing self), performing usual activities, pain/discomfort, anxiety/depression. Sample groups of the general population are separately asked to calibrate the health states by considering the loss of life years or risk of death that they would be willing to incur to achieve perfect health, so that QALYs for shifts from one state to another can be derived. In principle, monetary values could then be attached to different interventions by establishing willingness to pay for overall health gains in terms of QALYs.

The plurality of aspects of value described in the previous section (utility, capability, social justice, and the value of social expression of these values) are not well captured by this technique. The most obvious problem with deriving valuations of health interventions from personal preferences is that they fail to capture the value created by the delivery of care as an expression of societal concern and respect – both for individuals and for social fairness. To this I return below.

With regard to the capability and utility dimensions, economists may be tempted to continue to use stated and revealed preference techniques for estimating monetary values: who better than the individuals concerned to assess the value of enhanced capabilities and improved welfare. One might argue that it is of little concern whether what is valued by respondents is merely utility or some broader “extra-welfarist”\(^{26}\) conception of value. What is important for the robustness of the evaluative framework is merely that the values attributed to different outcomes using the quasi-choice or preference based methodologies conventionally employed (see Dolan 2000) are commensurable.

For example, when a disability is evaluated by asking how much risk of death people would accept or how many years of life they would give up to achieve full health were they in that state, it might be argued that their responses will incorporate both the utility and the capability aspects of health. Similarly, if those suffering disability are offered a choice between treatment and cash, they will evaluate the health gain on offer in both dimensions against the other goods that they could obtain with money (which may include utility or capability enhancing services).

After all, as mentioned above, the trade-off between utility and capability, between pain and ability to function, is very familiar to clinicians and patients coping with terminal illness: pain relief can sometimes only be fully effective if it is so strong as to impair consciousness. At the limit, pain relief may threaten life itself. Even in such circumstances, people manage to make choices. The twin dimensions to the value of healthcare are in practice routinely traded against each other, and hence appear to present no profound problems of incommensurability.

Yet, the assumption that individuals are best placed to value potential enhancements to their own capability (as well as to their utility) is questionable. For what is valued in capability is not simply the ability to generate future utility – it is also the ability to lead good lives in the ethical sense. Nor is it plausible that this value is reducible to personal utility.\(^{27}\)

Social valuation of capability enhancement may differ systematically from personal valuation, and it is the former that should guide allocation. Estimation of social values may also employ surveys but their purpose is fundamentally different from that of conventional preference elicitation to inform estimates of personal utility. Individuals are relatively authoritative with respect to their own utility. The valuations implicit in their expressed preferences may be expected to bear a close (albeit notoriously imperfect) relationship to the utility that different options actually yield, especially if care is taken to focus respondents appropriately on private benefits. Further it is plausible that in most circumstances there is none more authoritative than the individuals themselves. The relationship between societal values (the values expressed by average members of society) and social values (the values that ought to inform social decision-making) is much more vexed. It is embedded in the process of social decision-making that is correct for a society at the time. Where decision-makers can legitimately lead

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26 Culyer 1989

27 See Sober and Wilson (1999) for a sustained critique of the view that all action is ultimately driven by personal utility. Both in evolutionary and psychological terms this thesis is shown to be both complex and implausible. Sen emphasises the distance between personal subjective utility assessment and objective value when explicating the notion of capability – see his distinction between agency freedom and well being freedom in Sen 1992, chapter 4. Both Sober and Wilson and Sen also assert that personal choices can be driven by ethical as well as by self-interested motives. And it is possible that such motives are reflected in revealed and stated preferences – albeit partially and with bias. It is important therefore to clarify precisely what dimensions of value are being elicited.
rather than follow public attitudes in matters such as capital punishment or religious tolerance, it must also be legitimate for moral leadership to be shown in the more recondite field of the relative valuation of capability enhancement or prioritisation of the worst off to other uses of public funds. Note that this approach to the determination of social values is embodied in the use of expert committees to give views on such matters as the ethical constraints on gene research. Hence preference elicitation techniques must be used only in a focused way to inform rather than to dictate social decision-making.

Nevertheless it might be thought that there is a specific rôle for preference elicitation to inform valuation of capability enhancement: individuals might be best placed to judge the value of their own capabilities. There are, however, specific reasons for concern that individual estimates of the relative value of capability-enhancing treatments may understate their true social value. Two forms of bias are of concern: akrasia and myopia. They apply equally to valuations based upon stated preferences (in *ad hoc* questionnaires) and to valuations of health treatments derived from preferences revealed in market decisions.

Akratic bias arises where an individual makes a choice that does not reflect her fundamental evaluation of the options because the temptation of immediate pleasure or removal of pain overwhelms her judgment. Suppose my daughter is about to practice her 'cello, and I offer to give her money to go to the cinema. Suppose she accepts. This will not demonstrate that the cinema trip is as valuable to her as her 'cello practice, even in her own reflective judgment. Her choice may be a lapse due to weakness of the will.

Similarly if someone is offered a cheque (and some pain relief) instead of a hip replacement, acceptance may not properly reflect her valuation of the capability enhancement arising from the hip replacement. It may reflect rather the immediacy of the utility derivable from the cash, together with fear of the pain and discomfort of a major operation. The choice is rational, for utility and the avoidance of pain are sound reasons, but it may nevertheless not reflect the underlying values to which the patient would or should subscribe.

Myopic bias is illustrated by the difficulty that those suffering from a disability find in conceptualising the full gain from its relief. This applies particularly to considerations of capability – where the full gains from enhanced capability may not be realised for some years. How can the blind man value the benefits of vision? Conversely, those without disability may not appreciate the extent of adjustment to difficult circumstances of which they might prove capable. Concern to avoid myopic bias also justifies use of public rather than private discount rates, even when evaluating private costs and benefits.

It is true that all market decision making is affected by biases of various types, not least choices between immediate pleasure and long term advantage. The resulting allocation of resources is accordingly sub-optimal. In some cases public policy does intervene to correct these biases – subsidising goods, taxing bads. However, in general, it could well be argued that the gains in personal autonomy and in efficiency associated with allowing markets to work unimpeded outweigh the possible gains from attempting to correct such biases in individual choices.

Yet we are here considering a service that for other reasons is being procured by the public purse. In these circumstances, we are obliged to assess the true values of different allocative decisions. The conventional approach has been to mimic market responses. But where we
have reason to believe that a market choice would be biased, we should make allowance for that bias. Taxpayers and citizens are entitled to expect public decisions to be made upon the basis of considered *ex post* valuations rather than those influenced by akrasia or myopia. (Considerations of personal autonomy weigh only for policy options involving adoption of market mechanisms. No autonomy is gained by having public officials mimic market outcomes.)

Within the EQ5D framework mentioned above, two concerns arise. First that owing to myopia “usual activities” bear a less demanding meaning for the disadvantaged\(^\text{28}\) so that those suffering disabilities understate the full extent of loss involved. Second the weighting of this and the other capability dimensions of health (mobility, self care) against the other dimensions (pain/discomfort, anxiety/depression) may understate the value of the former. The under-valuation of capability may result from the biases identified or from the fact that the full cost of loss of capability may not be borne by respondents in the valuation exercise, but be shared by family and taxpayers.\(^\text{29}\) Similar problems would be inherited by any attempt to use expected QALYs or cognate survey-derived measure of health status to define the objective to reduce health inequalities.\(^\text{30}\)

Hence, bespoke methods to capture different dimensions of the value of health services merit investigation. Innovations might include the following.

- Given the personal nature of suffering, it is appropriate to estimate the value of its alleviation directly by discovering willingness to pay for mitigation of pain/discomfort or of anxiety/depression specifically amongst those suffering. (Sampling across income groups can correct for the diminishing marginal utility of consumption.) This is consistent with what has been called the “moment utility” approach to estimating the benefits of an intervention by sampling patients intermittently through the course of a treatment and its aftermath rather than merely in advance. However, to focus upon the value of relief from suffering, patients would have to be asked to express a willingness to pay for a treatment that offered no improvement in capability.

- The value of removing disability might be estimated in two complementary ways. The able bodied – who are in a better position to judge the full extent of the benefit from full bodily and mental function - could be asked to estimate what they would be willing to pay to avoid losing this or that capability. This may yield a larger assessment than would be yielded were people asked what they would be willing to pay to restore capability, as people adjust to disability. However, it is the larger sum that is appropriate if we are concerned with the full loss of capability, not merely with the loss offset by diminished expectations. Nevertheless, judgment would be subject to akratic and myopic biases *inter alia*. So it could be informed by and integrated with an objective assessment of the impact upon maximum lifetime earnings of certain disabilities.\(^\text{31}\)\(^\text{32}\)

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28 Similar ambiguities arise in the “role limitation” dimensions of the SF-6D health status instrument.
29 It is suggestive that in a valuation of health states described in Dolan et al (1995) the coefficient on loss of usual activities is a fraction of that on the other dimensions.
30 Such an agenda might be thought implicit in the publication in Kind et al (1999) of descriptive statistics of EQ-5D health status for different social classes, showing for example significantly lower health status for manual than for non-manual workers.
31 Some individuals choose to use their abilities in ways that are less than maximally remunerative. But even for these individuals maximum labour market earnings does provide an indication of the value of the capability.
data is commonplace in valuation of education. Clearly, not all capabilities have value fully or even partially captured in the labour market value, as is evident in the fact that some losses cannot be compensated. Indeed part of the motivation for developing contingent valuation techniques originally was precisely to compensate for the inadequacy of lifetime earnings based estimates of the value of life. Nevertheless, the labour market might provide a more objective anchor upon which to build willingness-to-pay based valuations. (The survey questionnaire could ask respondents how much they would be willing to pay per annum to avoid handicap X, with characteristics a, b, … n, amongst which is the statistic that handicap X typically reduces earnings by Y%.) It would also provide a perspective from which to judge third party costs of loss of capability (e.g. in tax revenues foregone) that should be included in social valuation.

- It is conceivable the social valuation of capability enhancement or of mitigation of suffering should be higher even than valuations derived in these ways, which reflect merely the aggregation of true private benefits. However, social values should be at least as high as those derived in this way, as in the absence of negative externalities, social values include private values.

- The values attributable to the social provision respectively of capability enhancement and of pain mitigation (by the techniques indicated in the previous two bullets) are objective social values. Valuation of interventions with indirect benefits, such as health promotion or screening, should be built upon and consistent with these social values rather than employing direct elicitation of public willingness to pay for such programmes. The expected enhancement to capabilities or mitigation of suffering should be valued in the manner indicated, and subsequently adjusted using public sector risk-adjustment factors and public-sector discount rates to account for the probability and timing of expected outcomes. Thus reliance upon idiosyncratic personal valuations of the benefits in question and upon personal attitudes to risk and discounting is avoided.33

- To these valuations must be added valuations of progress towards egalitarian and prioritarian objectives to reduce health, capability and general utility inequalities or to focus resources on the worst-off in any of these dimensions. Insight into the societal assessment of the appropriate trade-offs between these objectives on the one hand and the efficiency of the system in raising overall health on the other can be extracted from sophisticated preference elicitation studies. But, to repeat, such societal values are only aids to assessment of social values; they are not determinative of them. Further such preference elicitation must focus not on attitudes to personal health treatment but on the sort of society in which people would wish to live. And respondents must be as fully informed as possible about the budgetary and other conditions prevailing. Research might elicit views regarding the trade-offs between health equality and income objectives that

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32 See Talmud Tractate Baba Kama Chapter 8 for a parallel distinction in the valuation of different heads of damage for personal injury. Permanent damage is assessed by estimation of the value of potential lifetime earnings – perhaps equivalent to the impact upon capability. Pain on the other hand is assessed according to the sum that someone would be willing to accept to suffer like pain without injury. (As the injured party was entitled to remain without pain, it is the willingness-to-accept measure that is appropriate; whereas in allocation of healthcare, where there is no entitlement, income-adjusted willingness-to-pay should be used to assess the value of removal of pain.)

33 It would be logical to apply the same approach to valuation of avoided fatalities, focusing upon what people are willing to pay to avoid death (presumably their income less subsistence) rather than upon willingness to pay for marginal risk reductions. I hope to work out the consequences of such an approach in future work.
respondents are willing to make as, say, benign ethical advisers helping to design a system for a distant country in which they have no personal interest. The participants could be made to differentiate between more or less egalitarian distributions relating to different aspects of healthcare – mitigation of pain and suffering, and enhancement of capability. It would be critical to stipulate the minimum level of capability and the maximum level of pain in absolute terms: the willingness to sacrifice might rise exponentially to avert death or massive disability. It would likewise be important to clarify whether those suffering from health disadvantage in either dimension were also suffering from more general disadvantage, in order to test attitudes to health inequality specifically.

- This technique could be adapted to evaluate the aspects of the healthcare system that determine the nature of relationships pertaining between health professionals and patients, and between society and its members, so as to assess social values of delivery of care as an expression of societal concern:
  - Whether and to what extent overall outcomes should be sacrificed in order to shelter the doctor-patient relations from taint of incentives (either to treat or not to treat) by keeping doctors and nurses on salaries or otherwise, or by determining centrally which treatments to fund.
  - What costs should a society bear in order to express (equal) concern and respect for the avoidance of pain and for the capabilities of its members over and above the particular benefits arising from its interventions? Respondents might compare a society operating a public health system with one in which the same distribution of capability and utility was achieved fortuitously through private market forces. Which outcome is preferred and by how much? The answer might inform the threshold for benefit compared to cost to be set for the marginal (egalitarian) health project.

I do not suggest that these studies would yield binding answers to the health policy issues. As indicated above, such studies of public values can merely serve to inform the decision making process.

But this is true too of economic analyses of health issues that are more closely linked to personal utility functions. In both cases decisions are ultimately implicitly normative. In neither case does that imply that they should be analysis-free. The Cost Benefit Analysis framework can be used to make explicit the different aspects of value created by public service, and analytical tools can be used to inform debate as to the price worth paying to create such value.

Anderson E (1993), Value in Ethics and Economics, 1993

Andersson F, Lyttkens CH, "Preferences for equity in health behind a veil of ignorance" Health Econ 1999 8 369-76

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34 Cf. Andersson and Lyttkens (1999) who conducted a study of attitudes to different distributions of health across society, and extracted views indicating how many years of healthy life for the most advantaged should be sacrificed to gain additional years for the least advantaged. However, participants in the study were ignorant as to their own place in the society. In order to abstract from personal risk aversion, they might instead have been asked to advise between systems to be adopted in a target society.


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