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Welfarism vs. extra-welfarism

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Abstract

‘Extra-welfarism’ has received some attention in health economics, yet there is little consensus on what distinguishes it from more conventional ‘welfarist economics’. In this paper, we seek to identify the characteristics of each in order to make a systematic comparison of the ways in which they evaluate alternative social states. The focus, though this is not intended to be exclusive, is on health. Specifically, we highlight four areas in which the two schools differ: (i) the outcomes considered relevant in an evaluation; (ii) the sources of valuation of the relevant outcomes; (iii) the basis of weighting of relevant outcomes and (iv) interpersonal comparisons. We conclude that these differences are substantive.

Keywords: welfare, welfarism, extra-welfarism, health economics, Paretianism, utility, consumer sovereignty, distribution, equity.

JEL classification: I10, I31

Welfarism vs. extra-welfarism

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1. Introduction

Drawing lines around related ideas that neatly and completely separate them is never entirely possible. There is fuzz and haze at the edges. Despite this truth, it seems worthwhile at least to attempt to make clearer what seem to be significant differences of approach that have arisen in the normative analysis of health and health care. The approaches are those that have become labelled ‘welfarism’ and ‘extra-welfarism’. Extra-welfarism has received some attention in health economics (see for example Culyer, 1990; Hurley, 1998; Hurley, 2000; Brouwer and Koopmanschap, 2000; Birch and Donaldson, 2003) but there appears to be no consensus on its definition; nor is there any consensus on a general term to describe a deviation, such as extra-welfarism appears to be, from standard welfare economics. Even the label attached to it is disputed. In addition to ‘extra-welfarism’, ‘non-welfarism’ is sometimes encountered (e.g. Kaplow and Shavell, 2001; Dolan and Olsen, 2002) so proponents of traditional welfare economics can criticise what we shall still call ‘extra-welfarism’ as not only lacking an identity but, since the ‘non’ of non-welfarism seems to put it altogether beyond the bounds of welfare theory, as lacking any sort of foundation in economic theory at all (Birch and Donaldson, 2003).¹ One might indeed ask further: how is it possible to add anything ‘extra’ to welfarism? If welfare is an ultimate goal and it is comprised of individual utilities, and if anything important for individual welfare can be assigned a utility number, then to add anything ‘extra’ is at best to risk double-counting. So, for example, let it be asserted that ‘process’ is important for social welfare as well as ‘outcome’, then

¹ Although the term has also been used to simply indicate ‘not welfarist’ (e.g. Tsuchiya and Williams, 2001)

let standard welfarists ‘simply’ assign utilities to processes (of course we know that doing so may by no means be simple) and carry on as usual. Plainly extra-welfarism is an attempt to escape, at least in part, from standard welfarist theory. But to what? To be of interest, extra-welfarism must offer something that welfarism does not permit, despite its all-encompassing appearance.

In order to understand what might be ‘extra’ about extra-welfarism, we shall first explore what welfarism entails; any ‘extra’ in extra-welfarism will then lie beyond the limits of welfarism and we shall at least be clearer about what we are adding to (or subtracting from) welfarism. Unfortunately, a consensus on the content even of welfarism does not emerge self-evidently from the literature; it seems clear that different conceptions of both extra-welfarism and welfarism prevail. Some confine welfarism to a limited set of properties (e.g. Culyer, 1991), while others follow Bergson in setting no limits on what may count in a social welfare function – processes, institutions, equity, quality of relationships, social norms and so on *ad infinitum*, as long as these items can be captured in terms of individual utility.

Not surprisingly, the content of extra-welfarism is even less obvious from a perusal of the literature. Hurley (1998) for example claims that extra-welfarism replaces ‘utility’ with ‘health’ even though an explicit extra-welfarist like one of us (Culyer, 1990) cautions against discarding any outcomes, whether utility or health, and against discarding the relevance of a functional relationship between health and utility. Others may see extra-welfarism as a method of analysis in which explicit (and, in general, non-unitary) equity weights are attached to entities like individuals’ utility or health (e.g. Dolan, 1999a). It can be seen archetypically in cost-utility analysis where, instead of using effective demand and willingness to pay (as in cost-benefit analysis), something like ‘need’ is used (e.g. Culyer, 1995b, 1998). The latter concept is unrelated to the consumer’s ability to pay, which thus insulates welfare judgments not only from the prevailing income

distribution but also from the Pareto principle as used within the traditional welfare economic school (Brouwer and Koopmanschap, 2000).

This lack of clarity plainly hinders understanding of the differences between the two schools of thought. In this paper, we try to provide a clear dogmatic statement of what welfarism entails and, hence, an indication of wherein the ‘extra’ in extra-welfarism lies. We focus on theory rather than on applied work and highlight two interrelated topics that we conjecture to lie at the root of the distinction between welfarism and extra-welfarism:

(i) *The source and nature of valuation.* In welfarism, individual utility (or ‘welfare’) characterizes all outcomes and ‘social welfare’ is normally understood to be a function only of individual utilities. It is this restriction that has been labelled ‘*welfarism*’ (e.g. Sen, 1977; Boadway and Bruce, 1984). Normative frameworks that do not make this restriction may therefore be labelled as “extra-welfarist”. Within such frameworks, individual utilities might be replaced by something else (for example, by Sen’s ‘*capabilities*’).

(ii) *The Pareto-principle and the initial distribution of wealth and income.* The Pareto principle² states that social welfare unambiguously increases only if the welfare of any member of society increases and that of no one falls. In applications of welfarism the initial distribution of income and wealth is normally taken as a given and changes in either cannot be evaluated beyond requiring that any such changes themselves satisfy the Pareto criterion (as they may, for example, in a society containing some altruists). The potential Pareto criterion, requiring the gains related to some change to outweigh the losses caused by it, with both expressed in monetary terms, is a less

² Strictly speaking, the Pareto criterion can be viewed as merely an aggregation and decision rule – which could indeed be applied to non-utility characteristics, like health, as has been suggested (Culyer, 1995a; Hurley, 2000). However, we will refer to Paretian economics as a species of welfare economics in which individual utilities are the central outcome but are interpersonally incomparable, the initial income distribution is taken as the starting point for analysis and the (potential) Pareto principle is used to determine welfare changes.

restrictive criterion. Yet this criterion may be viewed as normally representing a serious compromising of the Pareto principle, making explicit interpersonal comparisons of uncompensated gains or losses by assigning an equal unitary shadow weight to each dollar gain or loss, independently of identity while ignoring all other types of uncompensated change or initial differences between individuals. In extra-welfarism, however, uncompensated changes - even those that would not satisfy the potential Pareto criterion - may be judged to be social improvements (or deteriorations) by invoking additional ethical criteria, and deliberate attempts are often made to compensate for the undesired consequences of the distribution of purchasing power by focusing on what is sometimes termed the distribution of 'need', and by weighting everyone's need explicitly and according to a set of ethical principles that lie outside the ambit of traditional welfare economic framework.

The difference in perspective between welfarism and extra-welfarism becomes especially relevant when assessing (changes in) social as distinct from individual welfare, as it is especially on the comparison of persons that much social policy in practice focuses: the distribution of such characteristics as health, skills, wealth, handicap, information, social isolation, parenting competencies, that may be more directly germane to societal welfare than mere preference satisfaction and willingness to pay, and where the differences between people frequently raise issues of equity. It is precisely here that students of social policy often feel that welfarism is impotent and that either something 'extra' is needed or that economics has become irrelevant. Such concerns are far from new. Ever since Arrow's classic work on the impossibility of constructing a non-dictatorial social welfare function, economists' thinking on how to identify increases in social welfare has nonetheless continued to have been dominated by the Pareto improvement, which normally has little cutting power beyond the realm of voluntary trading in well-regulated markets. It was primarily Sen (e.g. 1987) who began to release economists from this limited scope and empower them to address a much wider range of social issues. Sen's work

may therefore be seen as one signally important starting point for extra-welfarism. There are, as we shall see, others as well.

The structure of the rest of the paper is as follows. Section 2 outlines more completely what welfarism entails. Section 3 does the same for extra-welfarism. We have, however, allowed some leakage from each section into the other since neither compartment is entirely waterproof. Section 4 highlights the differences in tabular form and presents our conclusions.

2. Welfarism and welfare economics

Welfarism is not a synonym for welfare economics, though it is an important element in it. The central objective of the study of welfare economics is to provide a coherent ethical framework for making meaningful statements about whether some states of the world are socially preferable to others (Boadway and Bruce, 1984). Thus, *In order to make statements about the consequences for economic welfare of an event we must go beyond the study of positive economics, which is concerned with the effects of an event on objectively measurable economic variables, such as price and quantity. That is, the welfare economist wishes to determine the desirability of a particular policy – not in terms of his or her own values, but in terms of some explicitly stated ethical criteria* (Boadway and Bruce, 1984, p.1).

Welfare economists have developed a dominant framework for assessing particular states of the world as better than or ethically preferable to others. This framework is built on explicit normative principles but it is clearly not the only principled normative way of thinking about the relative desirability of different states of the world (for example Rawls (1971) provided an influential alternative). The neo-classical framework is built on four key tenets (e.g. Hurley, 2000):

- (i) the utility principle (i.e. individuals rationally maximize their welfare by ordering options and choosing the preferred option);

- (ii) individual sovereignty (i.e. individuals are themselves the best – some might say ‘the only’ - judges of what contributes most to their utility and how much that contribution is);
- (iii) consequentialism (i.e. utility is derived only from the outcomes of behaviour and processes rather than the processes themselves or intentions that led to the outcomes); and
- (iv) welfarism (i.e. *‘the proposition that the ‘goodness’ of any situation ... be judged solely on the basis of the utility levels attained by individuals in that situation’* (Hurley, 1998, p.377) or, as Sen puts it (1986, p.111): *‘judging the goodness of states of affairs only by utility information’*).

The predominant welfare economics stream that is built on these four tenets is what, following Sen (e.g. 1977), we shall call ‘welfarist economics’ from here on. Welfarist economics may be further divided into two broad traditions: classical and neo-classical. Roughly speaking, in the classical tradition (the ‘old’ welfarist economics) utilities were cardinally measured, could be added across individuals and the social optimum was reached when this sum was at a maximum (assuming a given population). The neo-classical tradition also has two broad subdivisions. In one, the Paretian tradition of the ‘new’ welfarist economics, utility was usually ordinally measured, interpersonal comparisons were held to be ‘impossible’ or ‘meaningless’ or ‘unscientific’, and an overall social judgement was reached by using the Pareto principle: any increase of utility for one individual that involved no utility loss for another was an improvement and an optimum was where no reallocation of resources could be made without reducing at least one person’s utility (there might be many such ‘optima’, choice between which is impossible using only the Pareto criterion). In the other tradition, interpersonal comparisons are made by using a Bergson-Samuelson social welfare function (Bergson, 1948; Samuelson, 1947). This enabled analysts to select preferred distributions of welfare on a welfare frontier, provided some explicit normative choice was made regarding distributional concerns (the matter on which the

Pareto criterion was silent). In all variants of welfarist economics, however, not only is non-utility information irrelevant to the making of social orderings, so are the identities of the creators and receivers of utility.

Welfarism, narrowly interpreted, is therefore only the fourth of the four main tenets of the dominant welfarist economics framework – the one that confines the ‘evaluative space’ (Sen, 1993) to individual utility only. Taken together, ‘... *these four tenets require that any policy be judged solely in terms of resulting utilities achieved by individuals, as assessed by the individuals themselves*’ (Hurley, 1998, p. 377).

The concept of utility

‘Utility’ has a long and varied ancestry and we need to be clear about the meanings we intend to attach to it. The notion of ‘utility’ is commonly treated in a fairly cavalier fashion, for example, by being considered synonymous with ‘welfare’, ‘satisfaction’, ‘happiness’ or ‘preference’, as though each of these were the same thing and carried the same ethical weight, and as though ‘utility’ must necessarily have a normative use – as distinct, for example, from a merely predictive or descriptive use as an index of choice. As Van Praag (1993) notes, the attitude of economics towards the concept of utility has always been (and continues to be) ambiguous, since the concept has been central in the development of both normative and positive theory, but its exact meaning and measurability has always been a matter for discussion. Two prominent ways of interpreting utility are, to use Cohen’s (1993) terms; *preference satisfaction*, that is, a way of treating how people make preference orderings of states of the world with their preference being more satisfied as higher ranking states are reached; and *hedonic welfare*, that is a desirable or agreeable state of consciousness – enjoyment or happiness or even pleasure. The second interpretation has a long tradition (e.g. the greatest happiness for the greatest number) though even Bentham had already insisted that there was no “*sufficiently manifest connection between the idea of happiness and*

pleasure *on the one hand, and the idea of utility, on the other*” (quoted in Roemer, 1996, p.13). Yet, the measurement of ‘happiness’ has enjoyed something of a resurgence in recent empirical research (e.g. Easterlin, 1995; Oswald, 1997; Kahneman et al., 1997; Frey and Stutzer, 2002). In this genre, an index of ‘happiness’ seems to be used as a (partial) index of welfare and is understood to have a deeper meaning than mere superficial pleasure. Ferrer-i-Carbonell and Frijters, for instance, take the answer to (different types of) happiness questions to describe ‘general satisfaction’ which in turn is seen as “*a positive monotonic transformation of an underlying metaphysical concept called welfare*” (Ferrer-i-Carbonell and Frijters, 2004).

We shall, however, take it that utility numbers are a representation of an individual’s *preference ordering* over bundles of goods or states of the world and, in welfarist economics, an individual moving to a preferred state of the world is an equivalent statement to an individual having a higher level of utility. We shall not assume welfarism to require that these preferences have any particular grounding – for example, that preferences need to be only self-regarding, or a reflection of the pleasure to be had from anticipated consumption. Thus, we do not caricature welfarism as assuming hedonism or selfishness. However, welfarists do not usually enquire as to how these preferences may have come about nor do they judge them on grounds of decency, ethics, aesthetics or any other ground.

It is important to be clear in this respect since the same carelessness in the use of the concept of utility has also led some economists into solipsistic treatments of social welfare – for example, that all choice, social as well as individual, can be reduced to preferences by the simple device of allowing people to have preferences about preferences. Such reasoning adds new dimensions to what Robinson (1962, p.47) called the “impregnable circularity” of the concept of utility.

Any confusion about the meaning of utility will diminish the value of utility theory and over-restrict the application of what is, at root, a simple idea, viz. that utility measurement is a systematic method of assigning numbers to entities according to an explicit choice-related rule (Alchian 1953). Likewise, one can assign numbers to verbal descriptions of health states so as to enable states to be identified in which there was ‘more’ or ‘less’ ‘health’. These numbers provide a rationale for choice, but do not necessarily have a direct bearing on anyone’s ‘satisfaction’ or ‘happiness’, nor are they necessarily based on the preferences of those affected by the choices they might inform. This divorce from preferences is particularly apposite when the numbers are used to make interpersonal comparisons (Brouwer and Koopmanschap, 2000). However, the choices made using such numbers are nonetheless intended to represent a change of some kind, such as improving the output of the health care sector. The use of such indices therefore still qualifies as being within the broad church of welfare economics indicated by Boadway and Bruce (1984).

In an attempt to not add to the confusion and carelessness in this area, we will use the term welfare from this point onward to indicate the utility of people in a narrow, that is welfarist, sense. When we refer to a broader measure or evaluation of welfare, which may include more than only individual utility, we will use the term well-being, which allows something *extra-welfarist* to be considered. It seems also better (at least from an extra-welfarist perspective) not to call such numbers ‘utilities’, though, extra-welfarists may claim, this is precisely what is done in ‘cost-utility analysis’, where the denominator of incremental cost-utility ratios is a measure of health, like the EQ-5D.

The sources of utility in welfarist economics

Culyer (1991, p.67) narrowed the scope of welfarist economics by arguing that the source of utility in welfarist economics is highly restrictive: “*One approach ... which has become the traditional one in*

economics as a whole, is what Sen ... calls 'welfarist'. This is very much in accord with liberal political opinion and asserts that social welfare ... is a function of only individual welfare (or utility) and judgements about the superiority of one state of the world ... over another are made irrespective of the non-utility aspects of each state. Moreover, the individual welfares (or utilities) are a function only of goods and services consumed' by the individual himself.

Some welfarist economists do not restrict the sources of utility to goods and services, though these are undoubtedly one major source. Thus, Hochman and Rodgers' (1969) pioneering analysis of Paretian income distribution extended welfarist economics' scope in one direction, to incorporate utility interdependence as a kind of externality. Becker used utility theory extensively, though rarely normatively, in his influential analyses of fertility, habit, marriage, family size, crime and punishment (see e.g. Becker, 1968; Becker, 1993). Culyer also used this approach in an explicitly normative way in justifying subsidized health care and charitable behaviour (e.g. Culyer 1971a, 1971b) though there are major analytical problems lying at its root (Sugden 1982, 1985).

A similar inclusivity might be claimed for welfarist economics with regard to the tenet of consequentialism. Sometimes this tenet has been criticised for admitting processes and procedures, or even freedoms. Some welfarists have sought to broaden analysis in such a way as to allow that individual utility can be derived from processes, procedures and freedoms because they may have the direct characteristics of pleasantness or unpleasantness, or because processes themselves may be consequences (for example, of prior decisions reflecting preferences), or may also have consequences – consequences that might be appraised in either welfarist or non-welfarist ways but that are still consequentialist. A growing body of literature, both in the general economic literature as well as in the health economic literature, uses procedural or process utility (Hahn, 1982; Benz and Stutzer, 2003; Frey et al., 2004; Birch et al., 2004; Brouwer et al., 2005; Tsuchiya et al., 2005). Narrowly defined consequentialism is thus not intrinsic to welfarist economics, though welfarist economics considers only procedures and consequences that have

utility consequences rooted in the preferences of individuals. Indeed, if there is a single tenet of the four that characterises welfarist economics, and only welfarist economics, it would seem to be the tenet of welfarism.

From individual to social welfare

Classical utilitarianism, in which the maximisation of total welfare, or total utility, was also the sole objective, was less nervous of making interpersonal comparisons than the ‘new’ welfarist economics has been: ‘*Utilitarianism is a species of welfarist consequentialism – that particular form of it which requires simply adding up individual welfares or utilities.....*’ (Sen and Williams, 1982, p.4). Sen (1986) indicates that no approach to welfare economics has received as much support over the years as classical utilitarianism. Indeed, given the four tenets of welfarist economics, classical utilitarianism seems a natural way of stipulating a social welfare function. According each an equal weight has superficial democratic appeal, though that begs questions concerning, for example, the appropriateness of using ‘democracy’ as a criterion for equity. There are other ways of combining individual utilities to make a social ordering, such as attaching weights to them. It is not uncommon in the welfarist school to work with equity weights in a social welfare function (e.g. Roemer, 1996). It is not clear, however, what such weights represent. Even if these weights apply to the distribution of utility only, which seems necessary in a welfarist framework, it is unclear that the weights themselves qualify as utility information (see e.g. Dolan, 1998; Johannesson, 1999; Dolan, 1999a for related discussions). This will depend on their source. They might reflect utilities (while not double-counting what is already captured in the individual utilities), since it is possible to speak of distributions that are themselves more or less ‘preferred’. Still, it is difficult to envisage how moving to a preferred distribution would or should then not be reflected in at least one person’s higher *individual* utility – whose utility is otherwise being improved by moving to a preferred state? Unless individualistic preferences existed over distributions, which are not reflected in individual utilities, it does not seem possible for welfarism itself to deliver principles

to inform decisions about weights to be used in a social welfare function (including a decision that they should be unity). In that case, some source of independent values needs to be imported from ‘outside’ to determine the weights to be attached to individual utilities. That, in itself is, of course, already something ‘extra’.

The initial income distribution is conventionally not challengeable in welfarist economics, especially in applied research. Instead, the initial distribution is used as a kind of anchorpoint from which to judge changes in social welfare. It is not claimed to be devoid of ethical significance. It is simply that Paretianism alone offers no reason for preferring or not preferring it relative to any other possible, Pareto optimal distribution. Thus, in applied cost-benefit analysis, interpersonal comparisons of monetary uncompensated gains or losses are made that assign an equal unitary shadow weight to each dollar gain or loss, independently of whose it is. Moreover, applied cost-benefit analysis ignores any other types of uncompensated change or initial differences between individuals. As in conventional markets, net utility is monetarily expressed through willingness and ability to pay in terms of Harberger triangles (Harberger, 1971). This is, of course, potential Pareto improving with the (non-Paretian) assumption that individual welfares can, after all, be compared in monetary terms and that the appropriate weight for each is unity.

In conclusion, the central characteristic of welfarist economics is that it confines the evaluative space to individual utilities only. This can severely limit the evaluation, especially when any comparability of utilities between individuals is considered impossible. As we will explain below, extra-welfarism opens up the evaluative space to be able to include more than only individual utility.

3. Extra-welfarism

We think that the extra-welfarist approach differs from the welfarist in four general ways: (i) it permits the use of outcomes other than utility; (ii) it permits the use of sources of valuation other

than the affected individuals, (iii) it permits the weighting of outcomes (whether utility or other) according to principles that need not be preference-based and (iv) it permits interpersonal comparisons of well-being in a variety of dimensions, thus enabling moving beyond Paretian economics. In this section we highlight these points. First, however, we indicate, without claiming the intellectual history to be complete, that extra-welfarism has had a number of roots in the literature over the years (Culyer, 2007). The section ends by emphasizing that extra-welfarism is not confined to health care only nor should it be seen as a type of analysis that is restricted to health alone.

Seeds from which extra-welfarism has grown

An early seed was sown in public finance in the shape of ‘merit goods’ (Musgrave, 1959): goods that need not be public goods but that are deemed so ‘meritorious’ that they ought to be subsidized by the state – though what qualified such goods as ‘meritorious’ was never quite clear, nor was it fully clear how these goods differed from goods whose consumption generated externalities (Culyer, 1971c).

A second seed was sown by Tobin (1970). He argued that the desire for equality is specific rather than general (‘specific egalitarianism’) and that some basic goods and services (like health care) are, as a matter of fact, commonly thought to be more properly allocated in egalitarian ways than others. Similar ideas are met in other disciplines like philosophy, such as the notion of ‘basic goods’ used by Rawls (1971) though he explicitly excluded both health and health care from the list of ‘primary goods’. Walzer (1983) uses ‘spheres of justice’ to indicate that the distribution of different goods may relate to different types of justice.

A third, especially influential, seed was sown by Sen (1980) in arguing that a focus on mere individual utility was too narrow and ought to be replaced by a broader perspective that took

account of the *quality* of utility and of people's *capabilities* rather than exclusively of the emotional reaction (i.e. utility) of individuals to the possession of goods or capabilities. Sen thus directly attacked the tenet of welfarism on the grounds of it being too narrow and too focused on mental reactions to goods and states rather than on what goods and states enabled people to do and be. He also warned against the strict application of the Pareto principle. The sublime Paretian indifference to alternative distributions of income and wealth has produced some of Sen's most caustic comments: an economy can be Pareto-optimal, yet still "*perfectly disgusting*" by any standards (Sen, 1970, p.22) and "*A state can be Pareto-optimal with some people in extreme misery and others rolling in luxury, so long as the miserable cannot be made better off without cutting into the luxury of the rich. Pareto can, like 'Caesar's spirit', 'come hot from hell'*" (Sen, 1987, p.32).

A fourth seed might be regarded as the explicit rejection of strict welfarist economics by governments. Some governments are very explicit about the proper role of willingness and ability to pay in allocating health care. In the UK, for example, the 1944 white paper on health '*A National Health Service*' stated that "*The government (...) wants to ensure that in the future every man, woman and child can rely on getting (...) the best medical and other facilities available; that their getting them shall not depend on whether they can pay for them or any other factor irrelevant to real need*" (as quoted in Van Doorslaer et al., 1993). In the face of such explicit statements from politically authoritative sources it seems curmudgeonly to insist on not going further than Pareto will allow. Moreover, the emphasis in the health care sector is clearly on improving *health*, which contrasts with the evaluative space under welfarist economics.

A fifth significant seed was the 'decision-making' approach to cost-benefit analysis suggested by Sugden and Williams (1978) through which they contrasted the welfarist approach with its embodiment of 'individual sovereignty' with one in which 'decision-makers' were the source of values (and weights) in public decision-making. This focus on the relevant decision maker to be

aided by the analyst may also explain some practical choices in the analysis, such as the perspective – which, in contrast to the welfare economics framework, does not always entail the adoption of a societal perspective regarding either costs or, particularly in the case of health economics evaluations, in terms of effects, where the focus is, purposely, mainly on health (Brouwer et al., 2006). Note that in this context, the rejection of individual sovereignty does not need to pertain to the assessment of individual utility, as it does within the welfarist stream, but can relate to some other desideratum, like health, that is in the evaluative space of an extra-welfarist evaluation.

The term ‘extra-welfarism’ has been particularly used by health economists (for example, Hurley, 1998, 2000; Williams, 1993). Culyer’s use of this term was based on the idea that ‘capabilities’ might be broadened to embrace a wider range of human characteristics associated with what is commonly thought of as ‘well-being’ and that judgements might appropriately be made on behalf of, rather than by, affected individuals. This seems especially relevant for judgements concerning the production and distribution of public and so-called ‘merit’ goods. Extra-welfarism therefore has been described as introducing ‘...an important class of ‘extra’ welfare sources ... the non-goods characteristics of individuals (like whether they are happy, out of pain, free to choose, physically mobile, honest). Extra-welfarism thus transcends traditional welfare: it does not exclude individual welfares from the judgements about the social state, but it does supplement them with other aspects of individuals (including even the quality of the relationships between individuals, groups and social classes)’ (Culyer, 1991, p.67).

Extra-welfarism thus rejects the exclusive focus on individual utility and thereby broadens the evaluative space to include other desiderata. There is a clear parallel with the capabilities approach advocated by Sen: ‘the capability approach is concerned primarily with the identification of value-objects, and sees the evaluative space in terms of functionings and capabilities to function’ (Sen, 1993, p.32). This rejection of individual utility as the only outcome of interest in an evaluation marks a clear separation

between welfarist economics and extra-welfarism. This distinction will now be highlighted further.

Other outcomes than utility

Extra-welfarism thus transcends welfarist economics. It does not focus solely on individual utilities, but neither does it completely eschew them. It complements utility information with other ‘non-utility information’, of which the quality of utility, equity weights, characteristics and capabilities are some examples. Information about or based on ‘preferences’ is not the only kind of information permitted to be weighed in the quasi-utilitarian balance. These additional considerations do not merely amount to a weighting of conventional Harberger triangles. Sen (1980, p.212) stated that the *‘relevance of non-utility information to moral judgments is the central issue involved in disputing welfarism.’* Brouwer and Koopmanschap (2000) in a similar context stated that: *‘... within extra-welfarism one does not necessarily have to translate all these aspects into utility-weights in order to take them into consideration in the analysis’.* Hurley (1998) more comprehensively claimed that extra-welfarism rejects *‘the exclusive focus on utility-based notions of welfare.’* Such a shift of focus allows the consideration of something extra. Sen, for instance, stated that *‘because of the nature of the evaluative space, the capability approach differs from utilitarian evaluation (more generally ‘welfarist’ evaluation) in making room for a variety of human acts and states in themselves (not just because they may produce utility, nor just to the extent that they yield utility)’* (Sen, 1993, p.33).

Kaplow and Shavell (2001) represented extra-welfarism (which they call ‘non-welfarism’) as inserting an additional non-utility argument into the social welfare function. Thus ‘non-welfarist’ policymaking relates to arguments in the social welfare function that enhance the well-being of society other than via individual utilities. This seems to us to be an unnecessarily restrictive view of extra-welfarism. There may, indeed, be additional arguments in the function but there may also be a shift of focus away from individual welfare, different sources of value, different weights

attached to arguments and types of value that are not preference-based. Social choices might clearly, then, account in several ways for the effects of policy on utilities or other relevant outcomes and the decision is therefore not seen as being necessarily driven by the utility considerations (however ‘weighted’) alone.

This is just what many health economists appear to have done in treating ‘health’ (rather than the utility actually derived from health) as both a maximand and a distribuendum of a health care system. Indeed, health has become seen as the central (if not exclusive) focus of evaluations, given that health care policy makers, as clients of economic analysts, are interested mainly in this aspect of human life. Health is pursued and valued by policy makers for its own sake (and possibly because of its impact on productivity) rather than because it yields utility or merely to the extent that it yields utility. Although good health certainly also contributes to welfare and, for that matter, to equal opportunity for welfare (e.g. Arneson, 1989), it is valuable in itself as an important characteristic of human beings. Indeed, especially in the context of health it has been claimed that *‘utility is an unsuitable guide to policy, if only because a person may adjust his expectations to his condition. The fact that a person has learned to live with adversity, and to smile courageously in the face of it, should not nullify his claim to compensation.’* (Cohen, 1993, p.17).

A more fruitful way of characterizing the evaluative space of extra-welfarism, therefore, is not in terms of any weighted sum of individual utilities, but as an assembly of other characteristics of individuals, like health, some of which might be, but need not be, measured – as in ‘cost-utility analysis’ - by utility-like scalings but which are neither determined a priori nor combined by following a priori rules. It is therefore possible for an optimal state under welfarism to be classed as suboptimal if there is judged to be a maldistribution of any one such characteristic (like health). The use of QALYs also demonstrates that it is not necessary to completely reject preference measurement within extra-welfarism. Brouwer and Koopmanschap (2000) claim that in an extra-

welfarist framework there still can be a role for preference measurement in, for example, ranking health gains. Health may be an argument in the production function of well-being, but it is multidimensional and some aspects of health may be accorded more importance than others. Extra-welfarism does not preclude the use of preferences in ranking capabilities or characteristics or in deciding such matters as whether, for example, treating deafness yields more important improvements than treating blindness. Sen (1993, p.33) indicated that ‘*various substantive ways of evaluating functionings and capabilities can all belong to the general capability approach*’. Preference measurement is one such way, but not the only one.

Determining the content of the evaluative space calls for a deliberative process of some kind to determine what (and who) to include and what to exclude. Under extra-welfarism policy makers become one important potential source of value judgements, which links clearly to the decision-making approach advocated in Sugden and Williams (1978). This need for selection and discrimination, as Sen (1993) stipulates, is neither an embarrassment nor a unique difficulty of approaches that use an evaluative space other than that of welfarist economics, since the latter is itself entails a priori selection and discrimination. In health care, the evaluative space has, naturally enough, focused on health, often measured as QALYs, not because QALYs capture utility but because they measure health, using an acceptable and systematic rule to rank health states. The interpretation of QALYs as a measure of health is also reflected in their subsequent use, for example, in directly comparing individuals’ health, which is an uncommon way of treating conventional utilities (Brouwer and Koopmanschap, 2000).

Sources of valuation

It seems a short hop from these considerations to the conclusion that amongst the decisions to be taken is one about whose values are to be used to underpin utility and other preference- or value-based estimates of benefit and costs. Whereas in welfarist economics the affected group of

individuals is the primary source of valuation, in extra-welfarist economics any number of stakeholders might be regarded as appropriate sources of different values for different entities and how they ought to be traded off against one another and compared interpersonally. This choice might vary according to the level of aggregation of decision-making and the size and character of the jurisdiction in which the decisions are being made. Moreover, in acting as agents for their clients, the public, we do not have to assume that decision makers are acting as they think the principals whom they represent would act, but rather as they think they *ought* to act.

Extra-welfarism may thus be inherently paternalistic. If it is wished to weight utilities, to define the outcome parameters of interest and to allow changes not sanctioned by the Pareto criterion, an authority (decision-makers, wise women, the general public, an elected or appointed committee, a citizens' jury, or some other organ) is plainly required. Indeed, as Sen (1993, p.33) indicates, the definition of the evaluative space '*has a good deal of cutting power on its own, both because of what it includes as potentially valuable and because of what it excludes.*' Economists are not, of course, equipped to *make* value judgements regarding the evaluative space. They can, however, help those who are charged to make such judgments, who need to understand the options and their consequences; and economists may also be able to derive values from experimental groups or samples of relevant populations through modern methods for eliciting preferences. Choices about which groups to sample are not normally for the analyst to make but for the ultimate decision-maker whom the analyst advises. There is debate about the appropriateness of various possible sources of value (e.g. Dolan, 1999b) but the practice embodies the (one might say extra-welfarist) idea that even someone who under no conceivable circumstance would actually consume the good in question may be a relevant source of preferences or other elicitation. In short, preferences may still occupy a key role in extra-welfarist calculation, though not necessarily the preferences of direct, or prospective, beneficiaries.

Weightings

Suppose it is intended to weight a benefit such as health according to a characteristic of the people receiving it. The characteristic in question may be related to their health state or to other characteristics such as age or productivity. Williams (e.g. 1997) has argued cogently for the ‘fair innings’: society ought to attach more weight to QALYs gained by the young (or, rather, those who have not yet had their fair innings) than the elderly (or, rather, those who already had their fair innings). In contrast, the WHO’s age weights (e.g. Murray 1996) reflect the productive contribution of persons at different ages to society, something which is normally reflected in the calculation of indirect costs (see e.g. Sculpher, 2001). Others (e.g. Nord, 1995; Stolk et al., 2004) have suggested that QALY gains for persons with poor levels of initial health or those who stand to lose a large proportion of remaining health should receive more weight compared to gains in persons with a higher initial health level or standing to lose a smaller proportion of remaining health. Rather than applying such relative weights on a presumption of generalized diminishing marginal utility of health, it is applied for reasons of equity. Although a consensus amongst extra-welfarists on why and how QALYs ought to be weighted does not exist, it is apparent that such weights are recognized as not being treated purely as utility information (e.g. Dolan, 1999a); they do not, as a rule, even relate to the utility, as distinct from the health, of individuals. They are ‘extra’ to welfarism. This contrasts to the tenet of welfarism which ‘*acknowledges the relevance of no information but welfare in the context of equality*’, as Cohen (1993, p.11-12) puts it. In extra-welfarism, therefore, a concern about distribution may reflect something else – such as a concern for fairness that is not rooted in individual utility but may have different philosophical origins and may pertain to non-utility characteristics of people, like their health. The ‘something else’ permits, for example, the possibility of saying that a society might be a better society if it were to embody some feature not because it was preferred but because it was right for it to be embodied. The weights may thus reflect perceptions of need, desert, just compensation, or other criteria beyond or, as we would say, ‘extra’ to welfarism and welfarist economics. They may require some meta-

entity (e.g. an agent of society like a committee to determine which drugs are to be added to a formulary) with its own ethical rules for weighting individual utilities or combining them in deliberative ways.

A common way of assigning weights under extra-welfarism is on the basis of equalising some characteristic of human beings such as health. Sen (1980) uses the term ‘basic capability equality’. This particular form of equity, which could be viewed as an extension of Rawls’s focus on primary goods, is exactly what is striven for in the field of health care with its characteristic focus on improving health and reducing health inequalities.

Beyond Pareto

In welfarist economics, interpersonal comparisons in the evaluative space of utility are normally deemed impossible or meaningless³. However, explicit interpersonal comparisons seem to lie at the heart of many extra-welfarist approaches to public decision-making. Although one may not know for sure whether an unhealthy person has less utility than a healthy one, we do know that the unhealthy person has less (current or prospective) health. Having explicit quantitative measures, even if imperfect, plainly both makes interpersonal comparisons more practical and affords opportunities to test and monitor the effectiveness of policies designed to improve health or reduce health inequalities.

The use of health-related quality of life measures (such as the QALY) allows individuals to be compared within a health domain and permits the economist to address directly questions raised by decision-makers who have selected ‘health maximization’ as one of a number of important policy objectives. Thus QALYs may be interpreted as a principal outcome of (effective) health

³ Note that welfarism does, of course, not necessarily entail incomparability of utility, as under classical utilitarianism or when used in a social welfare function approach (see e.g. Bleichrodt, 1997).

care - measures of changes in capability⁴ (and characteristics) that reflect (if appropriately designed) the principal dimensions of quality of life deemed to be of significance by the ‘decision maker’ involved or by the ‘public’ served by the decision making authority in question. They, however, need not be utilities in any conventional sense of ‘utility’ even though sometimes the rules used to assign numbers and the properties held to be desirable (such as transitivity) may be similar. Other systematic ways of assigning numbers to health states, ones that are not designed to yield conventional utilities, like a simple visual analogue scale asking people to indicate where different health states should be ranked between death and perfect health, may be judged equally useful for a decision maker aiming to improve health.

QALYs also facilitate joint research with practitioners of other disciplines (such as epidemiology) and professions (such as medicine) that have not typically adopted quasi-utilitarian frameworks for their own evaluation of health care technologies. In this way, policy paralysis resulting from refusing to compare individual welfares and reliance on the Pareto criterion is avoided. People can be compared in terms of their (weighted) endowment of some capability. In health care, this capability usually relates, as an empirical matter of fact, to health as measured in terms of QALYs. However, the QALY is not a necessary outcome of extra-welfarism and may well come to be eschewed in preference for some other means of health measurement and valuation.

Other considerations also separate extra-welfarism and traditional Paretian economics. Hurley (1998) has contrasted effective demand (as determined in part by the prevailing wealth distribution) with ‘effective need’. Need is then related to the prospects for gaining health and the effectiveness of health services is determined by the availability of a cost-effective technology (e.g. Maynard, 1999). Sen (1980, p.217) maintained long ago that “*even the concept of needs does not get adequate coverage through the information on ... utility.*” This clear separation of need from ability to pay

⁴ The interpretation of QALYs as capabilities has also received attention in the literature (e.g. Cookson, 2005; Anand, 2005; Grewal et al., 2006)

is another contrast with applied welfarist economics and is very common in health economics. Moreover, in health economics the distribution of income may be especially important given the correlation between income levels and the incidence and prevalence of disease (the so-called social gradient of health) and sometimes, the use of health care services. The use of need as central aspect in distribution of resources is a clear deviation from welfarist economics.

Health alone?

Unsurprisingly, extra-welfarism has sometimes come to be seen in health economics as a school of thought that postulates health rather than utility maximization (e.g. Hurley, 2000; Mooney, 2005). This, however, seems to us to mistake a single example of a valid application of extra-welfarism for the totality of the scope of its application. First, health does not have to be the only object of concern in extra-welfarism despite the fact that collaboration with psychologists, epidemiologists and others in designing and applying a valid construct of health has been a major preoccupation of extra-welfarists involved in developing techniques of economic appraisal for health care. Second, health maximisation is manifestly meaningless as a *general* maximandum for the public sector, and one might easily imagine extra-welfarists applying their framework of analysis in other fields of social policy: education, housing, criminal justice, poverty reduction, fair employment, and so on. Third, health production – like the production of other characteristics that are not welfarist utilities - ultimately involves opportunity costs that embrace both utility and non-utility sources of well-being throughout the whole gamut of society and so forgone health alone cannot constitute the sole opportunity cost of public sector resources, even if it counts as the principal opportunity cost within a health care sector (see e.g. Olsen and Richardson, 1999). Fourth, extra-welfarism does not intrinsically exclude preference-based measures of anything, and many extra-welfarists strongly advocate the use of preference-based measures of health. Such measures of health may use systematic ways of assigning numbers to entities that can be interpreted in any of a variety of ways: for example, as indicating an order of preference, or of

capability, or of acceptability, or of moral rectitude, or (to give a non-normative example) of predicted choice. It is perfectly permissible, for example, for extra-welfarists to seek to ground the principal value-judgements embodied in, for example, QALYs in the preferences of representative members of the population to be served, or some subset of it, though we do not consider the resultant numbers to be utilities as conventionally understood in welfarist economics.

4. Closing remarks

In this section, we attempt to briefly bring the foregoing accounts of the welfarist approach (in its various guises) and extra-welfarist approach (in the most general guise we can ascribe to it) face to face in order to facilitate comparisons. For convenience we display the comparisons in tabular form.

Table 1: Summary of four main and related differences between the welfarist and extra-welfarist approaches

	<i>Under Welfarist economics</i>	<i>Under Extra-Welfarism</i>
Relevant outcomes	Only individual utility, normally taken to represent preference orderings. Social welfare is a function of individual welfares.	May include individual utility as well as extra measures and indicators of well-being. In health policy, common outcomes will include health or health gain and the distribution of health or health gain, but may include other measures like patient satisfaction or caregiver burden. The selection of relevant outcomes is an important element in extra-welfarist evaluation and is context dependent and seems not for economists to decide (rather for decision-makers with authority). Some outcome measures may be based on preference measurement, when this is deemed a useful way to measure characteristics of interest.
Source of valuation of relevant outcomes	As a rule the affected individual.	Might be the affected individual, but could also be an expert or a representative sample of the general public or an authoritative decision-

		maker.
Weighting of relevant outcomes	Sometimes permitted in a Social Welfare Function, where the weights normally pertain to the distribution of individual utilities. Unclear whether such weights still classify as utility information.	Allowed and often considered important as means of incorporating equity and other considerations. Weights may be based upon a variety of ethical considerations including wealth, need and desert and can relate to the variety of relevant outcomes considered important (e.g. capabilities).
Interpersonal comparability of relevant outcomes	Although some theoretical approaches allow it (e.g. in a social welfare function), especially in applied work normally considered impossible in the relevant evaluative space, i.e. individual utilities.	Explicitly allowed in the relevant outcomes, though normally not in terms of individual utility, but rather in terms of capabilities and characteristics like health, handicap, ability to cope, schooling, ability to exercise discretion.

As one may infer from table 1, the main difference between the two schools of thought relates to the delineation of the relevant evaluative space. Under welfarist economics this is, by definition, individual utility, whereas extra-welfarism broadens the evaluative space to include other relevant outcomes in addition to utility, for instance capabilities or characteristics such as health. These are considered as important desiderata in themselves, not just because they produce utility nor to the extent they produce utility (Sen, 1993). So extra-welfarism is different from welfarist economics first and foremost by rejecting the tenet of welfarism and allowing other elements than individual utility to be considered in the analysis. The other differences between the two schools to a large extent follow from this first difference. For example, extra-welfarism allows other sources of valuation of the relevant outcomes while still allowing that individual utility will often be better elicited from the individuals in question rather than some others. Extra-welfarism allows interpersonal comparisons, but it does not try to compare individual utilities but rather their characteristics and capabilities, like their health. The ‘extra’ that extra-welfarism has to offer must therefore be found in the broadening of the evaluative space and the consequences that has for performing an evaluation.

In broad terms, it seems to us that the welfarist approach is a special subset of extra-welfarism in which the evaluative space is limited to individual utility only, so extra-welfarism is a more general framework of analysis. The extra-welfarist approach is adaptable to a variety of situations and can be designed to be responsive to this variety. Its application is not restricted to health care. The context in which it is applied will, we conjecture, often determine the relevant evaluative space and this determination is an important exercise in itself, requiring authoritative decisions. In this sense, extra-welfarism can be seen as pragmatic (Brouwer and Koopmanschap, 2000) focusing on relevant outcomes contingent on the policy problem at hand. In this regard, extra-welfarism is clearly still a species of welfare economics according to the definition by Boadway and Bruce (1984) but it is not welfarist.

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References

- Alchian AA, 1953, The Meaning of Utility Measurement, *American Economic Review* 43, (1): 26–50.
- Anand P, 2005, QALYs and capabilities: a comment on Cookson, *Health Economics* 14, (12): 1283-1286
- Arneson R, 1989, Equality and equality of opportunity for welfare, *Philosophical Studies*, 56: 77–93
- Becker GS, 1968, Crime and Punishment: An Economic Approach, *Journal of Political Economy* 76 (2): 169-217
- Becker GS, 1993, *A treatise on the family*, Harvard University Press, Cambridge
- Benz M, A Stutzer (2003). Do Workers Enjoy Procedural Utility? *Applied Economics Quarterly* 49(2): 149-172.
- Bergson A.(1938) A Reformulation of Certain Aspects of Welfare Economics, *Quarterly Journal of Economics*, 52, 310-334.
- Birch S, C Donaldson, 2003, Valuing the benefits and costs of health care programmes: where's the 'extra' in extra-welfarism? *Soc Sci Med* 56(5):1121-1133
- Birch S, Melnikow J, Kuppermann M, 2003, Conservative versus aggressive follow up of mildly abnormal Pap smears: testing for process utility. *Health Econ.* 12(10):879-84.
- Boadway R, N Bruce, 1984, *Welfare economics*. Oxford: Basil Backwell
- Bleichrodt H, 1997, Health utility indices and equity considerations, *Journal of Health Economics* 16, 65-91
- Brouwer WBF, MA Koopmanschap, 2000, On the Economic Foundations of CEA. Ladies and gentlemen, take your positions! *Journal of Health Economics* 19: 439-459
- Brouwer WBF, NJA van Exel, B van den Berg, GAM van den Bos, MA Koopmanschap, 2005, Process utility from providing informal care: The benefit of caring. *Health Policy* 74(1): 85-99
- Brouwer WBF, NJA van Exel, RMPM Baltussen, FFH Rutten, 2006, A dollar is a dollar is a dollar – or is it? *Value in Health* 9(5): 341-347
- Cohen GA, 1993, Equality of what? On welfare, goods and capabilities. In: MC Nussbaum, AK Sen (eds) *The Quality of Life* (Clarendon Press, Oxford)
- Cookson R, 2005, QALYs and the capability approach, *Health Economics*, 14, (8): 817-829
- Culyer AJ, 1971a, The nature of the commodity 'health care' and its efficient allocation, *Oxford Economic Papers*, 23, 189-211
- Culyer AJ, 1971b, Medical care and the economics of giving, *Economica* 38, 295-303.

Culyer AJ, 1971c , Merit goods and the welfare economics of coercion, *Public Finance*, 26, 546-72.

Culyer AJ, 1990, Commodities, characteristics of commodities, characteristics of people, utilities and the quality of life, in: S Baldwin, C Godfrey and C Propper (eds), *The quality of life: perspectives and policies*. (London, Routledge)

Culyer AJ, 1991, The normative economics of health care finance and provision, in: A. McGuire, P Fenn and K Mayhew (eds), *Providing Health Care: The economics of Alternative systems of finance and delivery* (Oxford University Press, Oxford)

Culyer AJ, 1995a, Equality of what in health policy? Conflicts between the contenders”, Discussion paper 142 (University of York, Centre for Health Economics)

Culyer AJ, 1995b, Need: the idea won't do - but we still need it, *Social Science and Medicine*, 40, 727-730.

Culyer AJ, 1998, Need - is a consensus possible?, *Journal of Medical Ethics*, 24, 1998, 77-80.

Culyer AJ, 2001, Equity - some theory and its policy implications, *Journal of Medical Ethics*, 27, 2001, 275-283.

Culyer AJ, 2007, *Rationing health care - Alan Williams' decision-maker, the authority, and Pareto. Forthcoming in Be Reasonable: Following the Williams Way*, Proceedings of a Conference to Celebrate the Work of Alan Williams, London: Office of Health Economics, in press.

Daniels N, 1985, *Just Health Care* (Cambridge University Press, Cambridge)

Dolan P, 1998, The measurement of individual utility and social welfare, *Journal of Health Economics* 17, 39-52

Dolan P, 1999a, Drawing a veil over the measurement of social welfare – a reply to Johannesson, *Journal of Health Economics* 18, 387-390

Dolan P, 1999b, Whose preferences count? *Medical Decision Making*, 19(4), 482-486

Dolan P, Olsen JA, 2002, *Distributing Health Care: Economic and Ethical Issues*. (Oxford University Press, Oxford).

Easterlin R. 1995 Will Raising the Incomes of All Increase the Happiness of All?, *Journal of Economic Behaviour and Organization* 27, 35-48.

Ferrer-i-Carbonell, A, Frijters, P. How important is methodology for the estimates of the determinants of happiness? *The Economic Journal* 114(July): 641-659.

Frey B, Stutzer A. What Can Economists Learn from Happiness Research? *Journal of Economic Literature* 2002; 40: 402-435

Frey, BS, M Benz, A Stutzer, 2004, Introducing Procedural Utility: Not Only What, But Also How Matters. *Journal of Institutional and Theoretical Economics* 160(3): 377-401.

- Grewal I, Lewis J, Flynn T, Brown J, Bond J, Coast J, 2006, Developing attributes for a generic quality of life measure for older people: preferences or capabilities? *Social Science and Medicine* 2006;62(8):1891-1901
- Hahn F, 1982, On some difficulties of the utilitarian economist. In: Sen A.K. and B Williams. *Utilitarianism and beyond*. (Cambridge University Press, Cambridge)
- Harberger AC, 1971, Three basic postulates for applied welfare economics, *Journal of Economic Literature*, 9 (3), 785-797.
- Hochman, H and Rodgers, J, 1969, Pareto optimal redistribution. *American Economic Review* 59, 642-557.
- Hurley J, 1998, Welfarism, Extra-Welfarism and Evaluative Economic Analysis in the Health Care Sector, in: ML Barer, TE Getzen and GL Stoddard (eds), *Health, Health Care and Health Economics: Perspectives on Distribution* (John Wiley & Sons Ltd, Chichester)
- Hurley J, 2000, An overview of the normative economics of the health care sector. In: AJ Culyer and J Newhouse (eds). *Handbook of Health Economics*, Elsevier Science, Amsterdam
- Johannesson M, 1999, On aggregating QALYs: a comment on Dolan, *Journal of Health Economics* 18: 381-386
- Kahneman D, PP Wakker, RK Sarin (1997), Back to Bentham? Explorations of Experienced Utility, *The Quarterly Journal of Economics* 112, 375-405.
- Kaplow L, S Shavell, 2001, Any non-welfarist method of policy assessment violates the Pareto principle. *Journal of Political Economy* 2001; 109: 281-286
- Maynard A, 1999, Rationing health care: an exploration. *Health Policy* 49(1-2): 5-11
- Mooney G, 2005, Communitarian claims and community capabilities: furthering priority setting? *Soc Sci Med* 60(2):247-255
- Murray CJL (1996). Rethinking DALYs. In: Murray CJL, Lopez AD, eds. *The Global Burden of Disease. Global Burden of Disease and Injury Series*. (pp.1-98) Harvard University Press, Cambridge.
- Musgrave, RA (1959) *The Economics of Public Finance*, McGraw Hill, New York.
- Nord E, 1995, The person trade-off approach to valuing health care programs. *Medical Decision Making* 15, 201-208
- Olsen JA, J Richardson, 1999, Production gains from health care: what should be included in cost-effectiveness analyses? *Soc Sci Med* 49(1), 17-26
- Oswald A, 1997, Happiness and Economic Performance, *Economic Journal* 107, 1815-1831.
- Pareto V (1896) *Cours d'economie politique professé à l'université de Lausanne*. Vol 1. Lausanne: F. Rouge.

- Rawls J, 1971, *A theory of justice* (Harvard University Press, Cambridge, MA)
- Robbinson J (1962) *Economic Philosophy* (Aldine, Chicago).
- Roemer JE (1996) *Theories of Distributive Justice*. Harvard University Press, Cambridge Mass.
- Samuelson PA (1938) Welfare and International Trade , *American Economic Review*, 28, 261-266.
- Sculpher M, 2001, The role and estimation of productivity costs in economic evaluation. In: Drummond MF, McGuire A (eds) *Economic evaluation in health care: merging theory with practice*. (Oxford, Oxford University Press)
- Sen AK, 1970, *Collective choice and social welfare*. San Fransisco: Holden-Day
- Sen AK, 1977, Social choice theory: a re-examination. *Econometrica* 45: 53-89
- Sen AK, 1980, Equality of what? In: S. McMurrin (ed). *The Tanner Lectures on human values* Cambridge, Cambridge University Press
- Sen AK, B Williams. Introduction, 1982, In: Sen A.K. and B Williams. *Utilitarianism and beyond*. (Cambridge University Press, Cambridge)
- Sen AK, 1986, Social choice theory. In: KJ Arrow and MD Intriligator. *Handbook of mathematical economics*, vol III, Elsevier Science, Amsterdam
- Sen AK, 1987, *On ethics and economics*. Oxford: Blackwell Publishers
- Sen AK, 1993, Capability and well-being. In: MC Nussbaum, AK Sen (eds) *The Quality of Life* (Clarendon Press, Oxford)
- Stolk EA, G van Donselaar, WBF Brouwer, JJ van Busschbach, 2004, Reconciliation of economic concerns and health policy: illustration of an equity adjustment procedure using proportional shortfall. *PharmacoEconomics* 22(17), 1097-1107
- Sugden R, 1982, On the economics of philanthropy, *Economic Journal*, 92, 341-350
- Sugden R, 1985, Consistent conjectures and voluntary contributions to public goods: why the conventional theory does not work. *Journal of Public Economics*, 27, 117-124
- Sugden R, Williams A, 1978, *The Principles of Practical Cost-Benefit Analysis*. Oxford University Press, Oxford.
- Tobin, J (1970) On limiting the domain of inequality. *Journal of Law and Economics*, 13, 263-277.
- Tsuchiya A, Williams A, 2001, Welfare economics and economic evaluation In: Drummond M, McGuire A (eds) *Economic Evaluation in Health Care* (Oxford University Press)

Tsuchiya A, LS Miguel, R Edlin, A Wailoo, P Dolan (2005). Procedural Justice in Public Healthcare Resource Allocation. *Applied Health Economics and Health Policy* 4(2): 119-128.

van Doorslaer E., Wagstaff, A., Rutten, F. Eds. , 1993. *Equity in the finance and delivery of health care: an international perspective*, Oxford University Press, Oxford.

Van Praag BMS, 1993, The relativity of the welfare concept. In: MC Nussbaum, AK Sen (eds) *The Quality of Life* (Clarendon Press, Oxford)

Walzer M, 1983, *Spheres of Justice* (Martin Robertson)

Williams A, 1993, Priorities and research strategy in health economics for the 1990's. *Health Economics* 2; 4: 295-302

Williams A, 1997, Intergenerational equity: an exploration of the fair innings argument. *Health Economics* 6(2), 117-132