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What Does Equity in Health Mean?

by

João Pereira

DISCUSSION PAPER 61

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ABSTRACT

The question of what rules should be used in determining access to health and health care has been hardly addressed in the public debate on the future of the health service. In the UK, as in other countries, the goal of efficiency (production of output using least cost-methods) has dominated official pronouncements. Far from the public view, however, another controversy has raged on the "other objective" of economic policy: *equity*, which implies that economic and social goods should be distributed fairly across individuals. Curiously, this debate has been characterized by an immense production of empirical facts and parallel disregard for the precise specification of equity objectives. However, unless the objectives of the health system are clearly specified empirical research can do little to reveal the reasons why equity is important, the extent to which specific types of inequality are compatible with equity, how the concept should be measured and how efficient policies to achieve equity goals may be formulated and monitored. To answer these questions it is necessary to specify a normative framework that may guide positive analysis in relation to policy-specific equity objectives.

The paper reviews a wide range of literature by firstly identifying a number of criteria for evaluating the diverse concepts of equity which have appeared in the literature. This is followed by a critical appraisal of six well-established approaches: equality, entitlement, the decent minimum, utilitarianism, Rawlsian maximin and envy-free allocations. All of these distribution rules are found wanting in some respect when applied to the health sector.

Given the shortcomings of traditional concepts, health economists have proposed alternative and novel formulations. The two most important contributions to date are Le Grand's notion of 'equity as choice' and the 'health maximization account', associated with economists at York University. Though these rules afford important insights into the question of what equity in the health domain entails, they too are problematic.

In the final part of the paper an approach which strangely has been virtually ignored by economists and others who share an interest in the health-equity problem is examined. Sen's 'capabilities' concept, it is argued, comes closer to achieving all the specified assessment criteria than any other formulation previously discussed. As such it could prove an effective framework within which to organize research and policy formulation in the area of health and health care inequality.

All European governments are seeking to reform their health care systems. All too often this process gives little attention to the primary goals of health care policy. Unless these are carefully specified and reforms carefully related to them it will be impossible to determine whether changes in policy, such as those envisaged in the NHS White Paper, can meet the designated objectives.

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1. Introduction

A significant feature of the inequality in health debate is that, until recently, it has tended to produce a wealth of empirical facts while at the same time showing scant regard for the precise specification of equity objectives. This, despite widespread acknowledgement that normative investigation is an essential prerequisite to understanding the reasons why people care about deviations from the ideal, the degree of inequality compatible with equity, its causes, how it should be measured and how rational policies may be formulated and monitored (cf. Le Grand, 1986; Green, 1988; Culyer, 1989a). The present paper is an attempt to redress the imbalance by searching for rules and tools of analysis that are capable of shedding light upon the equity of particular situations, policy proposals and solutions from analytical models. It constitutes an enabling stage to empirical research on the extent to which Portuguese health-equity objectives are being achieved and on how the situation may be improved in future. Many of its implications are, however, most obviously applicable to the study of health-equity in other countries.

The point of departure is as follows. In European countries, the period since 1980 has witnessed a vast research effort seeking to monitor and explain inequalities in health and health care. An array of statistics has been produced which generally present a mirror image of the patterns found by the Black Report for the UK (cf. DHSS, 1980; Illsley and Svensson, 1986). Much of this work, however, concentrates on measures of service-utilization and outcome (mainly mortality),

unquestioningly implying that equalizations of such parameters are objectives of national health policies. As a guide to action it may well be ill-conceived or inappropriate, inviting misunderstanding, detraction and disregard on the part of policy-makers. Each country will have its own equity goals suggesting different policies, so that if a health system has equality of access to health care as its aim it is not directly relevant to monitor differences in health care consumption *per se* and much less differences in mortality. Moreover, some countries, particularly where the provision of health care is more market oriented, specify their equity objectives not in terms of equality but with regard to the population being guaranteed a minimum standard of health care.¹

Economists were early to see that without more explicit consideration of normative issues the debate on equity in health and health care would remain "confused and confusing" (Mooney, 1983). Yet it was only very recently that the difficult challenge of disentangling such questions was reassumed (ie. Mooney and McGuire, 1987; Le Grand, 1987; Culyer, 1989a). These authors have provided illuminating contributions which go some way to clarifying the definitional steps that should precede a rigorous positive analysis of the problem. Their work also belies the widespread view that equity is an elusive, value-laden subject on which the discipline of economics has little to offer. Whilst addressing itself primarily to the interpretation of Portuguese policy objectives, the present paper provides an extensive review of the principal arguments put forward in the academic debate which has recently flourished. Specifically, it begins by setting out criteria for

1. See Wagstaff et al (1989) for a discussion of equity aims couched in terms of equality and those in terms of minimum standards.

assessing the various conceptions which have been proposed, goes on to review in a critical manner traditional and potential formulations in the sphere of health, and advances a novel approach, which draws on Sen's (1980) capabilities definition.

2. Scope and assessment criteria

It is useful to begin by clearing some ground: namely, the precise remit of the analysis (Section 2.1), and the criteria to be used in evaluating equity concepts (Section 2.2).

2.1. Scope

First of all, it is worth emphasising the distinct meaning attached here to the terms *equity* and *equality*, given that in past work they have at times been used interchangeably. Equality implies that shares in a distribution are *equal*; equity that they are in essence *fair* or *just*. Any correspondence between the two will occur only in the special case where equity is itself formulated in terms of equality. An equitable distribution can therefore be one where there is considerable inequality in the commodity under consideration.

Second, in contrast to the usual economic approach of analysing equity at the most *general* level (ie. how policies affect the overall distribution of utility, income or wealth) I am interested only in the distribution of specific commodities - namely, *health care* and, in so far as it is related to health services through a derived demand

relationship, *health* itself. This course of action has been labelled *specific egalitarianism* by Tobin (1970) and implies, according to that author, that "certain specific scarce commodities should be distributed less unequally than the ability to pay for them." Tobin included health care as one of these commodities and I shall take it as given that there is widespread concern that equity be seen to be accomplished in the health domain relative to other sectors. Further grounding could, of course, be sought in the particular specificities of the commodity health care as documented by Arrow (1963) and Culyer (1970). Once again I shall take this as established. The important point being that the analysis which follows should not be inferred for any good other than health or health care even if related arguments could be reasonably applied.

A further restriction is that I am searching for concepts that are suitable for interpreting specific Portuguese health-equity objectives. There is no question of providing a formulation which describes *the* just distribution of health care. As McLachlan and Maynard (1982) note "... equity, like beauty, is in the mind of the beholder." That I have chosen to incorporate the stated objectives of Portuguese health policy as an evaluation criterion is, therefore, but one possible approach. Another would be to state that there are more fundamental implicit aims such as health maximization, which enjoy universal acceptance and may in any case be interpreted as promoting justice (Culyer, 1988; Williams, 1988). Neither view is inherently invalid or mutually exclusive - though it will be argued further on that the latter is open to a number of criticisms. The important point, however, is that my choice has significant implications for what is to follow, in the sense that any eventual conclusions need not necessarily hold for all

types of health system. Lest it be said that this has the effect of making the analysis overly restrictive, it should be noted that the deductions are effectively applicable to countries, such as the UK, Spain or Italy, that define health-equity objectives in a similar fashion to Portugal (ie. in terms of equal access to health care).

In terms of their operationalization in research and policy evaluation, the definitions inherent in Portuguese legal and policy statements point to, at the most basic level, the following:²

- (i) that evaluating the equity objectives *in themselves* is a most necessary requirement, since the very fact that they are specified at all implies that there is a distinct concern for *distribution*, separate that is, from other explicit or implicit targets like maximizing the health of the community, consumer choice, efficiency and so on;
- (ii) that equity appears to require *equalization* of specific parameters across socio-economic groups rather than a basic minimum of provision or indeed any other configuration;
- (iii) that it is the *processes* of health production and health care delivery, rather than their final outputs, which matter in reaching decisions on whether equity is being achieved, since the concept of *access* is present in all definitions; and finally,

2. For a fuller discussion of Portuguese health-equity objectives see Pereira (1988b).

(iv) that equity should be achieved in *all forms* of publicly provided health care (ie. curative, preventive and rehabilitation) rather than in what are sometimes designated basic services.

The task is therefore to search for an economic approach which permits the measurement of patterns of inequality, the factors which contribute to it and reveals the appropriate corrective action which should be taken, while at the same time reflecting the concerns noted above.

Finally, it is worthwhile justifying the virtual omission of three themes which might reasonably have been given greater coverage in a comprehensive analysis of the normative specification of health-equity objectives. First, no explicit consideration is given here to possible trade-offs between equity and other social objectives such as economic efficiency. In this instance there seems to be a comparative advantage in narrowing the aim of the analysis. As Atkinson (1987) points out, economists often devote too much attention to trade-offs and all too little to considering whether specific policies are meeting stated objectives. But it is not only the possibility of generating information of more immediate interest that advises such an approach. The accepted technique for considering trade-offs in public policy - the social welfare function - also carries with it an inherent drawback. Though it permits the comparison, within the same framework, of different welfarist formulations, such as equality of outcomes or utilitarianism, it is only slightly informative if we are interested in the *process* which determined final outcome. As Friedman (1985) suggests "the appealing neatness of

integrating social values in one social welfare function... will not generally substitute for explicit evaluation by the general criteria of efficiency and equity separately." Consequently, this paper opts squarely for clarifying the formulation of equity objectives as a single normative element.

A second omission has to do with concepts of health and health care. A discussion of normative issues in the inequality in health debate should certainly consider these problematical concepts since they too are laden with value judgements (Ahmed and Coelho, 1979). While accepting that in future they should also be the focus of detailed analysis, here I shall not discuss them beyond what is strictly required for the problem at hand. Finally, the review considers the literature on *why* equity concerns initially arise, only in so far as it is helpful for understanding a particular definition. Two approaches to this question are possible: one which draws on categorizations of individual and collective values to socio-economic organization, and another which encompasses economic explanations such as Margolis' (1982) "utility in participation" theory, Sen's (1977) notion of "commitment" or the "caring externality" approach (Culyer, 1971). Both are discussed at length in Pereira (1988a). Neither this or the other omissions are crucial for the analysis which follows.

2.2. Assessment criteria

Since the principal aim of this paper is to search for a conception of equity that is suitable for informing the health-equity debate, it seems most appropriate to outline beforehand the criteria used

in evaluating different proposals. Suggestions with regard to such standards abound in the literature.³ Some writers stress that we should merely look for clarity and specificity while others propose complex mechanisms such as the Rawlsian "social contract", whereby from a hypothetical "original position" individuals establish an acceptable equity criterion. It has also been argued that intuition is as suitable form as any for judging the validity of a conception. Others still, propose more restrictive criteria such as the argument that a two-step approach which distinguishes equity from efficiency decisions is logically untenable or that only individual preferences, in contrast to third-party values, should count in judging the equity of a particular distribution.

In this paper five fairly obvious requirements that an acceptable economic formulation of equity in the health field should meet are put forward.

- First, a conception should be *easily comprehensible* so that it allows the widest interdisciplinary discourse and deduction of clear policy solutions.
- Second, it should be *specific and rigorous*, in order that concepts are not left so vague that they generate misunderstanding in application.⁴
- Third, given that an economic approach is sought, the

3. See, in this context, the contributions of Rawls (1971), Sen (1977) Pazner and Schmeidler (1978), Le Grand (1984) and Baumol (1986).

4. "Equality of opportunity", for example, is commonly upheld across the whole spectrum of public and political opinion. But this is largely a mirage, attributable to the diverse interpretations which the concept is capable of supporting.

formulation should be readily translatable into the *standard language of normative economics* and susceptible to *empirical verification*.

- Fourth, positive analysis of the concept should not be overburdened by *excessive information requirements* so that its testing is effectively ruled out (in particular, it should not require that utility be interpersonally comparable or cardinally measurable).
- And finally, the definition should be *widely acceptable* for the problem at hand, which I shall interpret as meaning that it should not disaccord with the concerns revealed in Portuguese *policy statements on health-equity*.

These seem a reasonable set of criteria on which to base our judgement, but at the same time they leave many questions unanswered. Consequently, other themes that have been raised in the literature are used here as a means of highlighting the differences and implications of proposed formulations. For instance, one might want to know whether a formulation bases itself on aggregation of individual preferences or if there is a remittance to external judgements? What variable is chosen as the metric for judging the equity of a particular distribution: health, health care or utility? Or if any priority is afforded to equity decisions over those which concern efficiency: that is, whether the two objectives are accomplished in a single step or seperately? Though some authors have taken particular aspects of these questions to constitute *a priori* assessment criteria it should be noted that in this paper they serve no other purpose than that of contrasting different equity conceptions.

3. A critique of traditional approaches to conceptualizing equity

There are six well-established conceptualizations of equity in the literature that may be considered relevant for the health inequality debate: equality, entitlement, the decent minimum, utilitarianism, Rawlsian maximin and envy-free allocations. Virtually all emanate from the discipline of political philosophy, but they share the characteristic of having drawn significant interest from economists. Their status in the literature as specifications of what equity generally entails is not in doubt, but it will be argued that, when applied to the health sector, they reveal particular shortcomings. I begin with what constitutes the most direct philosophical foundation for the type of policy objectives most often identified for health care systems such as Portugal's: the theory of equality.

3.1. Equality

Equality is sometimes taken to mean equalizing individual net benefits (ie. health status) or, once it is admitted that some attributes cannot be physically distributed, equalizing individual opportunities for such benefits. In an influential discussion, the philosopher Ronald Dworkin (1981) has distinguished between the two key notions of equality of welfare and equality of resources, arguing that any ethically supportable egalitarianism must call for equalizing the resources available to people, not their welfare or utility. Equality of welfare holds that:

" a distributional scheme treats people as equals when it distributes or transfers resources among them until no further transfer would leave them more equal in welfare."

Equality of resources, in contrast:

" treats them as equal when it distributes or transfers so that no further transfer would leave their share of the total resources more equal." (Dworkin, 1981, pp. 185-186)

Yet these distinctions only raise further questions. For instance, does equality of welfare in the health field require equality of health or attainment of equal levels of utility? Does equality of resources require simply equality of access (or opportunity of access) or does it require the use of resources in equal quantities? Should the definitions be applied in relation to State provided health care or across all resources, public and private?

Lengthy discussions of the distinctions possible within this approach and the competing policy objectives which they imply have, of course, been a feature of recent contributions to the health and social policy literature. Mooney (1983) and Le Grand (1982) proposed a number of interpretations which might be used as guides to health policy.⁵ Their definitions may be classified under three separate headings. Those which are formulated in terms of their impact on supposedly homogeneous populations, without regard to differences in health status or need for

5. See also, in this context, the more general discussion by O'Higgins (1987).

health care (ie. equality of public expenditure per capita); those which relate equity to people's need for care (ie. equality of treatment for equal need); and those which focus on the outcome of health care activities (ie. equal distribution of health itself). Though this early work was useful in highlighting the varied interpretations that might be given to the objective of achieving equality in the health domain it failed to relate policy-specific definitions to their economic or philosophical base. Significantly both Mooney (1987) and Le Grand (1987) have recently argued that the definitions suffer from a number of analytical and practical problems and may in some cases conflict with commonly held views of what is just and fair. Their preferred solutions for interpreting equity differ considerably from what might have been expected under the philosophy of equality, despite there being important contributions in the economics literature on the specification of egalitarian objectives.⁶ Indeed, one cannot help but feel that the lack of rigorous and consistent health-related analyses, within the equality perspective, is due to it remaining too elusive a concept as a principle of distribution.

Arguably, much of the applied work which implicitly draws on the egalitarian view is too permissive to be useful for policy recommendations. The Black Report, for example, concentrates overwhelmingly on inequalities in *health* despite there not being any logical or policy basis for such an objective. The reason seems to be that equality as an equity formulation simply lacks the specificity required, allowing researchers to imbue their own, or the information

6. See, for example, Atkinson (1982), Klappholz (1972) and Roemer (1986).

system's, values into the monitoring process. Furthermore, the concept fails to establish coherently why equalization of any type should in fact be accomplished. This vagueness and lack of development have been sorely felt by defenders of NHS-type arrangements in the inequality in health debate, which is all the more disheartening since, as will be shown later, an approach is available that can resolve many of the pitfalls which a referral to equality can engender. It does so by analysing thoughtfully the transmission process from resources to outcomes, which in the final analysis is the principal oversight in the equality account.

3.2. Distribution according to entitlement

Perhaps the best known rejection of equality has been provided by the libertarian philosopher Robert Nozick (1974) in his theory of distribution according to 'entitlement'. Its core position is that one is entitled to what one possesses provided it was acquired justly: that is, through earnings, through inheritance or through redistribution by government of holdings acquired illegally. It is, therefore, a procedural theory: whether or not a specific distribution is considered equitable depends entirely on the path used to reach it. While this is arguably a desirable characteristic of an equity formulation, its implications for distribution in the health domain are manifestly out of step with the concerns found in legal and policy statements.

It would seem that both health *and* health care are suitable metrics for assessing equity within the entitlement framework. The only important empirical question, in this context, would be to determine the *manner by which* these two commodities were acquired. It is not

difficult, however, to think of examples where its application would lead to outcomes widely regarded as inequitable. Consider the case of health, specifically where a child is born with a congenital deformity. Since the condition was inherited a strict application of 'entitlement' holds it to be fair. Nozick does refer to the possibility that in the case of "catastrophic moral horrors" entitlement rights might be compromised, but it is not at all clear how his theory would accommodate such waiving of rights, in the absence of formulation of other competing bases of moral judgements. So generally it may be said that the theory attaches no weight to the unfortunate: it is essentially a matter of fate that some are born in a healthy condition and others are plagued with chronic medical problems.

With regard to health care Nozick's approach is similarly restrictive. It suggests that no one citizen has a right to health care unless it has been acquired through the market. Attempts at redistributing resources, even if they were aimed at providing incentives for those who use health services less efficiently (ie. the less educated and the poor) would in themselves be considered an injustice. Nor is there recognition of sentiments of caring or generosity by the well with regard to the unwell, often given practical expression in the subsidization of health care services (Culyer, 1980). Finally, it fails to consider either the role of possessions which are received as social goods (ie. medical education) or the pervasion of externalities and consumer ignorance in the health care market. It matters not, therefore, that the conception is clear and specific, since its pursuit would, in all likelihood, lead to a distribution highly unfavourable to the poor and the sick.

3.3. The 'decent-minimum'

Given the extreme consequences of Nozick's principle of distribution for social or health policy other Libertarians have suggested a role for some sort of safety net, that is a standard below which individuals should not be allowed to fall. Such an approach - often designated the decent minimum - should, if applied rigorously, simply pertain to final outcomes of a process (ie. health itself). Invariably, however, it is specified as the provision of a minimum standard of *health care*, and points towards a configuration of services strongly weighted towards the private sector, with the State providing a limited and minimal level of care for the poor. The Portuguese health care system aims to achieve equity through universal coverage of citizens and general coverage of benefits, and hence it is doubtful whether the present approach could be considered suitable for that particular system.

It could be argued that by circumscribing the demands of equity to the provision of a 'decent basic minimum' the procedure is strong in terms of practical applicability. This is somewhat misleading since the key to its operationality is that it requires a value judgement as to what constitutes the decent or social minimum. Perhaps in recognition of the problems involved, its proponents have been reluctant to define exactly what it is. In the health field only Enthoven's (1980) discussion of a Consumer Choice Health Plan comes close to doing so. He suggests a list of "basic health services" which Health Maintenance

Organizations (HMO's) should provide.⁷ But it is far from clear that at the end we are left with a clear idea of what constitutes a decent minimum, since what are accepted as "basic services" may differ across time and contexts and because he provides no sound reason as to why certain types of care should be left on or off the list. Ultimately, the distinction made between high and low option plans suggests that we can choose the 'decent minimum' by reference to average costs for actuarial categories. This seems a somewhat unjust principle for allocating health care.

All this goes to suggest that the definition of an acceptable minimum standard is a complicated exercise. But suppose for the sake of argument that one were to be found: what would be the implications for applying the concept? It would seem that two measurements are required: the number or proportion of individuals not achieving the standard and the total quantity of the good required to raise all those below to the level of the accepted minimum. Posed in this fashion the problem appears as simply a supply-side phenomenon: redistributing health care resources from individuals above the minimum to those below. But if the supply of health care is less than perfectly inelastic it may be more productive to influence other inputs (ie. education or income) into the health production function, thereby increasing the demand for health care of those individuals below the minimum. By providing a simple uni-dimensional view of the equity question, the decent minimum approach overlooks this possibility. It appears then that a rule of allocation along these lines offers little scope for operationality, acceptability

7. See Loewy (1987) for an alternative, though equally problematic, specification of the decent minimum in terms of criteria.

or precision.

3.4. Utilitarianism

The goals of utilitarianism are commonly summarized as "serving the greatest good for the greatest number." In economic terms this implies a decision rule where resources are allocated so as to maximize aggregate utility. Quite why utilitarianism should be seen by so many as a theory of equitable distribution is difficult to perceive. Possibly it has to do with the well established result that an egalitarian distribution will result under classical utilitarian principles when there exist identical preferences (Culyer, 1980). But we have already seen that there is no logical connection between greater equality and greater equity. There is, however, a stronger argument, brought out in Sen's (1973) well known comment that "maximizing the sum of individual utilities is supremely unconcerned with the interpersonal distribution of that sum." The activities or individuals to which resources are allocated at the margin depends simply on comparisons of utility. Thus, if a rich individual responds better to a given course of treatment than a poor one, the utilitarian decision rule requires that more resources be attributed to him. The resulting distribution may well be efficient but it is unlikely that it will conform to most people's conception of equity.

Though it could be argued that such a reaction is simply the super-imposition of an alternative (non-explicit) moral judgement, it is based on most solid grounds. Once again Sen (1987a) provides the support by dissecting the three distinct principles which underpin

utilitarianism. They are: *welfarism*, which implies that extra-utility information (such as individuals needs, capacity for mobility and so on) is either irrelevant or only indirectly relevant as a causal influence on utilities; *sum-ranking*, which asserts that the goodness of a collection of utilities is simply their sum, thus eliminating the possibility of concern over inequalities in their distribution; and *consequentialism*, whereby all choice variables are judged simply in terms of the goodness of their respective consequences. In the health domain only the latter is defensible - in the sense that it excludes the acceptance of health care activities that do not promote the ultimate goal of good health. The other principles are simply too restrictive as basis for forming equity judgements.

There are also various technical problems associated with utilitarianism, all inevitably linked to the impossibility of measurement and interpersonal comparisons of utility. Indeed, the identification of a just utilitarian distribution depends upon such a wealth of empirical facts which are so difficult to obtain that it seems unproductive to attempt to apply it to health and health care. Furthermore, these factors are not directly deducible from the principle itself, which further complicates the exercise. It seems, then, that an appropriate conceptualization of health-equity concerns must be sought elsewhere.

3.5. Rawlsian maximin

Another prominent philosophical discussion of social justice, which has attracted the attention of economists, is John Rawls' (1971) theory of maximin. It makes justice an uncompromising aim in suggesting

that social policy, rather than maximizing net benefit in society, should seek to maximize the position of the least well-off. Rawls considers a set of goods whose production and distribution, he suggests, should not be left to individuals themselves. These 'primary social goods' include basic liberties; freedom of movement and choice of occupations against a background of fair opportunities; powers and prerogatives of office; income and wealth; and the social bases of self-respect. Rawls then hypothesises an 'original position' where all individuals operate under a 'veil of ignorance.' In such a context rational men would be risk averse and choose as a preferred arrangement a situation where the worse off have their position maximized. What drives them to such a choice is not a concern for the least advantaged but a fear that they themselves might turn out to be, once the veil of ignorance is uncovered, the worst-off citizens in society.

According to Le Grand (1987), the application of Rawlsian maximin to the health field requires that inequalities in either health or health care be justified only if they operate to the benefit of the least advantaged. He criticizes such a rule as a guide to health policy on two grounds. First, because it raises a number of theoretical and practical difficulties. For instance, are the least advantaged to be defined in terms of their overall consumption of primary goods or in terms of health or health care? Furthermore, is it realistic to suppose that we can readily distinguish those inequalities that benefit the least well-off from those that do not? One could add that the principle implicitly suggests that an equitable distribution would be that where all individuals have the health status of the sickest person. The second objection, has a libertarian strain. It is that maximin would lead to

redistribution to those whose poorer health, inadequate consumption of health care or actual poverty were the result of their own decisions. Arguably, however, Le Grand's direct application of the Rawlsian principle to the health field is too ambitious, for neither health or health care were designated as primary social goods by Rawls himself. Indeed, including either health or health care would imply trade-offs with other primary social goods such as income and wealth and inevitably interpersonal comparisons of utility which Rawls is keen to avoid.

Daniels (1981) has suggested that the most promising strategy for extending maximin theory to the health domain is to include health care services among the background institutions involved in providing for fair equality of opportunity. This is justified in the sense that health care is necessary for normal species functioning. However, such an approach merely has the effect of collapsing the definition of equity into one of equality of opportunity of access to health care for equal need.⁸ Therefore, although this interpretation appears in tune with the concerns of Portuguese health policy it has the unfortunate effect of making the theoretical structure redundant. We are left with no more than a simple interpretation of equity, which is problematic in terms of specificity, and no idea as to how the concept may be applied in positive analysis.

3.6. Envy-free allocations

The theoretical and practical problems associated with Utilitarianism and Maximin have led to a number of economic discussions

8. Daniels himself readily admits that his account "does not presuppose the acceptability of Rawls' theory" (Daniels, 1981).

which seek to provide a more rigorous grounding for equity concerns. The dominant approach concentrates on defining the essential characteristic of an equitable distribution. This is best described, it is suggested, by the criterion of non-envy: that is, where a person's relative advantage is judged by the standard of whether he or she would have preferred to have had the commodity bundle enjoyed by another person (Varian, 1974; Pazner and Schmeidler, 1978; Baumol, 1986). To illustrate the concept, in the context of a simple exchange economy, consider any allocation x_g^i ($g=1$ to n ; $i=1$ to m) of n goods to each of m individuals. Suppose these individuals have preferences represented by the ordinal utility function $U^i(x^i)$ ($i=1$ to m) of each individual i 's own consumption vector x^i . Then individual i is said to *envy* j if $U^i(x^j) > U^i(x^i)$. An equitable distribution is defined formally as that where $U^i(x^i) \geq U^i(x^j)$ for all pairs of individuals i and j .

Defenders of the approach have argued that it provides an easily comprehensible and specific formulation of equity; that it avoids the arbitrariness of external moral viewpoints by judging the desirability of a distribution exclusively in terms of the preferences of individuals affected by it; and that it lends itself well to the standard constructions of the economist (ie. indifference maps and utility theory). This much is true. The theory has indeed been used with considerable formal elegance to establish the conditions under which allocations are simultaneously equitable and Pareto-optimal ("fair" allocations), and hence provides a theoretical insight into the trade-off between efficiency and equity.

However, despite its attraction to economists it is doubtful

whether the non-envy approach could be suitably applied as a guide to equitable health policy. On the one hand, it is well-established in the technical literature that the pursuit of non-envy can lead to some peculiar and unpalatable results (Feldman, 1987). When agents are more or less symmetrical the concept seems to work quite well; yet if one or more agents happen to be, say chronically sick, there is no opportunity for exogenous compensation within the framework. Similarly, it could not account for a case where a kidney patient's demand for dialysis takes precedence, by general agreement, to a tennis player's demand for rackets; or less trivially, to an occasional headache sufferer's demand for analgesics. What is missing then is a view of what others might regard as equitable and not simply oneself. By concentrating exclusively on individual preferences the concept overlooks that generally, when making a judgement concerning the justice of a situation, one would wish to allow for differences in tastes, needs and so on. In this more common situation the appropriate comparison in determining what is inequitable becomes: whether $U^j(x^j) > U^i(x^i)$; rather than, as the non envy account suggests, if $U^i(x^j) > U^i(x^i)$.

Should one insist on overlooking these most obvious drawbacks and proceed to apply the concept to health policy it seems that only health care should be considered as a metric, given that health itself is indivisible. But even then the approach is uninformative since it fails to provide a more or less complete ranking of alternative states, which clearly appears necessary in the health field. It gives only an answer as to what constitutes a fair distribution; should no such feasible allocation be found (as seems to be the case in many situations in the technical literature, particularly when production is introduced) one is

left with no suggestions as to how decisions should be taken. Finally, it is doubtful whether a formulation founded on the idea of "envy" could gather wide acceptance as a measure of equity in health care. This may seem a strange comment when much of economics is built around the deadly sin of "greed", but arguably, a concern for health-equity derives precisely from the desire not to allow self improvement to override community interests.⁹ Certainly this is the picture which emerges from the analysis of Portugal's health policy objectives and thus non-envy must also be rejected as a suitable normative framework for considering the attainment of those objectives.

4. Recent approaches from health economics

Given the assessment criteria formerly laid out, each of the six traditional conceptualizations of equity discussed above have been found wanting in some respect. This is a conclusion also reached by other authors who have undertaken the search for suitable frameworks that may inform the health inequality debate (ie. Veatch, 1982; Le Grand, 1987). Naturally, alternative health-specific equity concepts have also appeared in the literature. Though so far they have not been subjected to widespread appraisal and generally lack the formal development of the specifications discussed beforehand, the very fact that they have been put forward as attempts to get to grips with distributional problems in the health arena, warrants the independent treatment they are given in this paper. I shall concentrate on the two approaches which have

9. See Mooney's (1986) application of Margolis' (1982) fair-shares theory of distribution to health concerns, for example.

attracted the greater attention by researchers in the field: one, a formulation advanced by Julian Le Grand which is centred on the role of choice in determining inequalities, and another associated with the York school of health economists, which if adopted holds considerable implications for the way equity is interpreted and monitored (the health maximization account).

4.1. Equity as choice

I turn first to Le Grand's equity as choice approach (Le Grand, 1984, 1987). Its guiding principle, when applied to health, is stated as follows: "if an individual's ill health results from factors beyond his or her control then the situation is inequitable; if it results from factors within his or her control then it is equitable." (Le Grand, 1987). Formally, the representative individual is said to be faced by a choice set which he seeks to maximize subject to constraints. These are defined as the factors beyond individual control and obviously limit the range of possibilities over which a person can make choices. In this context, an equitable situation is that which is the *outcome of individuals choosing over equal choice sets*. What matters here, then, is not the end result but the history of a specific situation. In this sense, equity as choice hearkens back to Nozick's (1974) entitlement formulation.

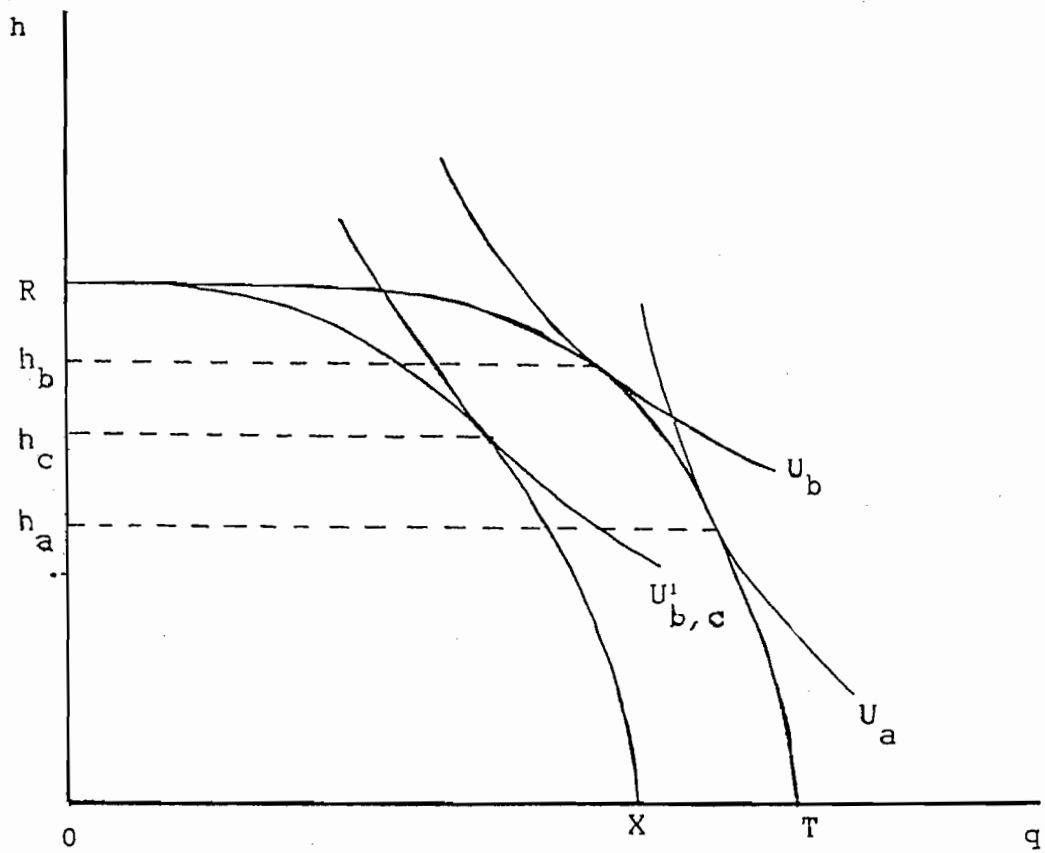
Figure 1 illustrates the general argument. An individual's health status (h) is plotted against the quantity of a health-harming activity (q), such as smoking, drinking, or working in a stressful environment. It is assumed that a trade-off is possible between h and q.

Le Grand considers two individuals, A and B, whose choice sets between h and q are identical and portrayed by the frontier RT . Both derive utility from the health harming activity and from health itself, but individual A derives greater pleasure from q relative to h , when compared to individual B. These assumptions are incorporated in the position of the indifference curves U_a and U_b . A's equilibrium point implies a lower level of health (h_a) than individual B's (h_b). According to Le Grand's conception this situation is not inequitable since both A and B have made informed decisions, exercised over the same range of choices and based on their own particular preferences.

A third individual, C, is now introduced into the analysis. His preference ordering is the same as B's, but given that he faces a different choice frontier (RX), his equilibrium health level turns out to be below B's at h_c . The shape of RX , according to Le Grand, incorporates the assumption that individual C is poorer and less able to withstand the effects of the health-harming activity. The differences in health between B and C are not held to be inequitable, since they arise not from dissimilar preferences but from different feasible choice sets. Therefore, distributions are only equitable if they are the outcome of individuals making choices under equal constraints.

FIGURE 1

Equity as choice



Source: LeGrand (1987)

Le Grand's notion of equity has obvious counterparts in the general economics literature, particularly conceptions which stress the importance of claims over commodity bundles and resources (ie. Archibald and Donaldson, 1979). The question here, however, is whether it is a suitable formulation of equity concerns in the field of health? It has some obvious advantages. On the one hand, by paying due respect to a distribution's history it serves as a useful reminder that information on end-states may not provide a sufficient basis for making equity judgements: it is equally as important to know how a particular distribution came about, whether it be health or health care. The choice theoretic framework in which the analysis is argued should also facilitate comparison with other economic principles of distribution and allow further development at the conceptual level. So far only the foundations of the approach have been put forward.

Equity as choice also reveals promise for application in positive analysis. In Grossman's (1972) model of the demand for health it has a ready made framework of individuals exercising choices regarding health investment and consumption decisions within constraints. Equity under that model could be interpreted as equalizing the present cost of health investment for all individuals. Intuitively such an approach appears remarkably similar to equalizing the constraints people face. Furthermore, though Le Grand does not directly point to it, there seems to be no reason why the concept should not be used to study inequality in health care rather than inequality in health. Once again our interest would seem to be better directed at the process of health care consumption (ie. time spent in a waiting-room, out-of-pocket payments, etc.) rather than its output (ie. utilization rates or overall

expenditures). If the former are differentially burdensome it can reasonably be argued that choices are not being exercised under equal constraints. Here too there are examples in the literature with regard to empirical analysis (ie. Sloan and Bentkover's (1979) equality in process variables approach).

Unfortunately, the equity as choice account is also open to a number of criticisms. It is far from clear, for example, that Le Grand has established, as he contends, a definition of equity which commands wide agreement in society. Some might argue that in the field of health, where uncertainty and consumer ignorance prevail, individuals are simply not in a position to make informed decisions. This problem is particularly acute in the case of medical care, while addiction to health-harming activities, as Le Grand accepts, poses related difficulties. In short, the assumptions of autonomous preferences, complete certainty and perfect information appear rather extreme in the health context. While on the one hand, this is not a crucial argument since relaxing the assumptions in positive analysis could make the account more relevant¹⁰, inevitable problems remain in deciding what precisely is to be ascribed to choice and what is not. So far the arguments put forward have done little to dispel the fear that such a task can only be accomplished in a less than rigorous manner.

Consider, for example, Le Grand's (1987) discussion of policy implications. One cannot help but be surprised how from an individualist framework arise fairly conventional egalitarian arguments. Although this

10. The introduction of uncertainty into the Grossman model as in Dardanoni and Wagstaff (1987) is a case in point.

is, of course, not inherently impossible there is a problem in so far as the latter are not intuitively derivable from the theoretical construct but depend at various stages on the introduction of further value judgements. It begins with the ruling out of equity as choice as a guide to allocation of treatment, because health professionals are judged not to be able to undertake such decisions. Rather, it is suggested that the criterion should only be applied to decisions on individual or community financing of treatment. It is shown that in this case applying equity as choice would yield the development of a perfectly competitive insurance market as the optimal policy. Confronted by the extremeness of this implication, which would leave the poor and the risk-averse uninsured, Le Grand suggests a role for exogenous compensation and opts for a pragmatic solution where a government agency levies a uniform charge on all individuals. None of these steps are logically derivable from the account. They are simply the result of further value judgements being introduced, because the probable outcomes are viewed as inequitable! This problem arises, of course, because the concepts of choice and constraints have been vaguely defined. Thus it is possible to transform what is apparently a precise conception into one where at every stage new value judgements are introduced if outcomes appear unfair. The dividing line between variables over which individuals can exercise choice and those which constitute constraints must, therefore, be the subject of careful definition in future.

Another problem with the approach is brought out in the diagrammatic exposition. A rigorous application of the concept would seem to point to choices being exercised simply over commodity bundles or resources (Archibald and Donaldson, 1979). Le Grand, however implies a

trade-off between an activity (which in the example is no more than consumption of the good tobacco) and an individual's health status. Supposedly this is justified in so far as 'smoking' and 'health' are fundamental commodities in the household production theory sense (Becker, 1965; Lancaster, 1966). But this may be a slightly over-ambitious interpretation with confusing policy implications. In health production individuals do not directly trade-off health-harming or health-producing activities with health itself. They 'choose' their health levels by trading-off the activities against each other: either investing or disinvesting in their health stock; in the former case through consumption of health care or education, in the latter through consumption of insalubrious lifestyle or nutrition commodities. The final product - healthy days - is the result of trade-offs between these commodities. Therefore, much groundwork would appear necessary if the concept is to serve as an appropriate guide to positive analysis.

4.2. Maximization of health

The other important principle to have emerged in the health economics literature is conveniently summarized by the phrase that a distribution is equitable *if and only if it serves to maximize the health of the community*. From a somewhat circumspect beginning the criterion is now arguably the principal focus of debate on the normative aspects of equitable health policy in the UK.¹¹ It is fair to say that, relative to other specifications, its principal distinguishing feature is that it affords primacy to efficiency; distributional questions are only

11. Indeed, a recently published volume (Bell and Mendus, 1988) is almost entirely dedicated to the question of whether health maximization is a suitable equity rule.

important when judged in terms of their contribution to that goal.¹² This has exposed the maximization thesis to the obvious criticism that its proper domain is the assessment of *total good* rather than the *fairness* of a situation (Broome, 1988). Dismissing the account on these grounds seems, however, altogether premature since a case can be made for interpreting health maximization as the logical corollary of a particular type of distributional concern.

Rather than appealing directly to a general principle of justice or defining what constitutes an equitable distribution, health economists have traditionally looked at what motivates individual concerns for fairness in health. One group of writers have formalized such an approach through what is commonly termed the 'caring externality' (Lindsay, 1969; Culyer, 1971, 1980). Individuals are held to be concerned not only with the bundle of goods and services they are to receive but also with that to be had by others. In this sense, generosity, sympathy or caring are explicitly incorporated into the analysis through the mechanism of specifically interdependent utility functions developed by Hochman and Rogers (1969). This is in stark contrast to the non-envy approach which has dominated economic discussions of equity. There, individuals consider the consumption bundles of others merely for the effects of comparison. Culyer (1971) postulates that it is the quantity of suffering rather than its distribution which forms the basis of the externality relation. This suggests that a preference for increased consumption of health care should be an argument in the utility functions of the well-off, rather

12.Culyer (1988) asserts categorically that "equality matters... only when it serves the cause of efficiency."

than equality of health care consumption as in Lindsay (1969), for it is actual under-consumption by the needy (implicitly associated with greater suffering) which imposes an external disutility on others.

Although this research was originally conceived as an explanation of widespread support for public financing of health care, indirectly, it holds important implications for the type of equity which should guide health policy. In particular, there are three key insights suggested by the approach: health status as the focus of concern; an absolute rather than relational objective; and a role for exogenous compensation. Strangely few writers have picked up on the implications of these aspects for equitable health policy. One reason why this might be so is that the account belongs to a completely separate literature. Equity is about fairness or justice, it refers to what people are due as of right; compassion refers to a desire to provide help to others regardless of their 'due'. This argument, however, misses the point that the two are simply alternative forms of justifying redistribution. One may wish to appeal to a general principle (as in the approaches discussed beforehand) or rely on the exercise of charitable compassion as fundamentation. The crucial point is that the compassion/caring approach itself suggests criteria for redistribution.

Some confusion appears to have developed in the literature regarding the actual definition of equity which derives from the caring externality approach. Mooney (1987) suggests that it is 'equality of utilization for equal need.' Culyer (1976) himself, argued that it "leans towards an egalitarian notion of 'equally available care for equally sick' or 'communism in health'." None of these conceptions

accommodates adequately what is perhaps the most important insight of Culyer's (1971) analysis: the health status of the 'needy' as the source of concern. Individuals care for others not because they are poor or materially deprived but because they are sick. Although in practice it may well be the rich who feel compassionate towards the poor there is no intrinsic reason why compassion and hence generosity should not be addressed to the rich sick person. This urges that health status be made the focus of distribution rather than income, welfare, commodities or primary social goods. Yet health is not a tradeable commodity, so how is one to develop a consistent definition of equity? It seems that only two routes are logically sustainable. On the one hand, considering a distribution as equitable if consumption of commodities which affect health is optimized and on the other, viewing any arrangement which maximizes health in the community as inherently equitable. In both cases the emphasis is on maximization/optimization rather than distribution; on absoluteness rather than relativity.

The second approach has recently been taken up by economists at York University. Drawing on the development of the Quality-Adjusted-Life-Year (QALY) measure of health, it has been suggested that general maximization of that metric is the most suitable means for achieving distributional goals. Hence, health maximization is treated implicitly as an equity principle in itself (Williams, 1988; Culyer, 1988, 1989a, 1989b). It should be noted that these authors have not sought support for the rule in the caring externality framework (or indeed in any other account of motivation for equity concerns), even though it appears to provide a case for pursuing community health maximization. Instead, justification has been offered on essentially instrumentalist grounds:

namely, that health services exist to promote health and hence, given scarcity of resources, one should strive to maximize the benefits accruing to the community (ie. health itself). The incorporation of specifically distributional concerns is then achieved by attaching weights to outcome data.¹³ It seems, therefore, that an appraisal of the account in terms of its suitability for informing the health inequality debate rests on the appropriateness of three related ideas: the QALY metric itself, which is the preferred outcome measure, the belief in health maximization as an embodiment of equity concerns and the notion of attaching distributional weights to outcome measures.

QALY maximization remains a controversial topic among health professionals (Smith, 1987), social scientists (Harris, 1987; Carr-Hill, 1988) and even among economists (West, 1986; Broome, 1988; Loomes, 1988). Besides furnishing the literature with a seemingly endless string of titles which are puns on the term "QALY", these works have raised some apposite objections to the measure, particularly those that base their critiques on the importance of risk and uncertainty or the unrepresentativeness of existing QALY valuations.¹⁴ This is not the place, however, in which to detail these criticisms; merely to highlight that, were the health maximization view of equity (in its present form) to be adopted, considerable effort would have to be expended in making the QALY metric more sensitive and robust as a measure of health status.

13. In effect, this largely pragmatic case for concentrating on health maximization casts the net much wider than the referral to a caring-externality argument would suggest.

14. The oft-cited argument that QALY maximization obscures a fundamentally *political* decision making process behind a *technical* procedure is generally unsustainable, since, if anything, it brings out into the open the values which determine a particular allocation of resources (Culyer, 1989b).

In any case the equity account does not presuppose acceptance of QALY's as a measure of health outcome. That its proponents have pointed to the measure as a suitable way forward is purely coincidental; what is really at stake is the idea of health *maximization* as an embodiment of equity concerns.

Opponents of the maximization view have consistently argued that it ignores the *distributional* concerns of public health care systems such as the NHS. Maximizing the sum of individual health states, after all, tells us nothing about the interpersonal distribution of that sum.¹⁵ Culyer (1989b) has faced up to this criticism with a largely consequentialist rationalization. He urges the reader to:

"...allow that the sickest in society are by and large those for whom the marginal product of health care in terms of QALY's is highest, that these are also the poorest, and that when (*ceteris paribus*) health service per capita rises, the marginal product in terms of health falls... [Then]... it evidently follows that efforts to equalize the geographical distribution of resources, to channel more of them to the sick and more of them to the poor, might be seen not as distributional policies to be justified by equity arguments but efficient policies justified by health maximization."

This counter-argument is intellectually appealing, not least for the fact that it points to an avenue for incorporating equity and efficiency objectives within a single policy procedure. It depends, however, on

15. The philosophical objection to this sum-ranking approach inherent in QALY maximization has been made most forcibly in the essays by Broome, Lockwood and Harris in the Bell and Mendus (1988) volume.

essentially empirical judgements which if proved wrong undermine the whole case. In particular there is not much evidence available that shows the marginal product of health care in terms of QALY's to be greater for the poor. Intuitively it may be quite the opposite. Consider the not implausible case of Anthony (who is relatively rich, well educated and well nourished) and Brenda (poor and relatively ignorant of efficient health production methods). Both suffer from the same ailment and both undergo the same treatment. Yet because of his personal and environmental characteristics Anthony is able to better respond to treatment and thus gains a greater number of QALY's. Should health policy then redistribute resources to individuals like him? Clearly few would agree with such a principle, since it implies that Anthony somehow merits the better health improvement because of his economic position. At the most basic level, therefore, health maximization does not seem to embody the equity concerns inherent in the Portuguese or most other health care systems.

iii

The reason for unpalatable results arising when simple health maximization is followed is that a unit of 'health' is treated as being of equal value no matter who gets it. Proponents have generally accepted this fact and now suggest that distributive weights are built into outcome measures. If these are correctly applied, in the sense that all the accepted features of distributional equity are incorporated, then there is no technical reason for treating equity independently of efficiency in research or policy formulation. The most recent work (Williams, 1988) has begun to tackle this question by finding out what distributional views are actually held by surveyed individuals. This is a promising line of research, but it is worrying that the utilized survey

actively encourages respondents to opt for some type of discrimination as to which groups of people should receive treatment (ie. the young, the old, those who have been careful with their health, the deprived, etc.). The justification offered is that scarcity of resources means that discrimination will effectively operate. Despite this, as many as forty per cent of individuals in the pilot-survey opted for none of the discriminations presented - a number far greater than that for any one particular type. Such neutrality might well have been greater had the interviewees been invited to present their own distribution rule. One suspects that these people actually do have some type of rule in mind - for example, that *everyone* should have the *opportunity* to be able to benefit from health care if it will do them some good. Curiously, Williams' analysis is rather dismissive of the non-discrimination argument, opting to ignore the reasons why such a view is adopted by such a large proportion of his sample. This is unfortunate for if the view were widely held the maximizing approach would seem to be on shaky ground, since a great many people are apparently willing to forego efficiency gains in order to assure that individual claims are equally or proportionately satisfied.

This brings us back to criticism of the very idea of health maximization as the prime objective of health systems. Of course, it would take a courageous stretch of the imagination to believe that it should not be an aim or indeed that technically, it is not the best way to proceed. Yet health systems consistently reveal other aims as paramount: the demonstration of caring or the non-exclusion of patient groups, for example. Non-discrimination is certainly an important feature of Portuguese health policy objectives. It may be that the

overall aim of medical care is indeed health maximization but that specific provision arrangements (such as an NHS) have adjacent objectives (such as guaranteeing equal access for equal need) which take precedence in any eventual trade-off. For the maximizing view to be accepted it must be shown that, generally, suitably weighted QALY maximization will yield results which are harmonious with equity concerns and that unpalatable outcomes are not a significant feature; and ultimately, it must prove its ability to incorporate what are effectively perceived as rights within the outcome measure, particularly those which pertain to the *processes* of health production and delivery of health care. The present state of knowledge, however, suggests that we have a long way to go before such circumstances are realized. The dimension of information required is simply too great. Given that an obvious desirable property for an equity criterion is that it have few information requirements one runs the risk of not tackling, in the foreseeable future, the problem of distribution in anything approaching an acceptable manner. Consequently, for practical as well as logical reasons our efforts would seem to be presently better directed at studying the problem of health and health care distribution in isolation from considerations of efficiency.

5. The basic capabilities approach: a new way of looking at equity in the health domain

In this section it is argued that, relative to the work reviewed thus far, a more promising formulation of equity concerns in the field of health is to be found in Sen's concept of basic capabilities (Sen, 1980, 1985). It provides a clarification of the debate on whether resources or

welfare should be the object of equitable policy by examining thoughtfully the transmission process from commodities (resources) to final outcomes (welfare) and arguing that it is the capability people have to transform commodities into human functionings (such as being able to work or to enjoy good health) which matters. The approach has been shown to be useful for the study of poverty issues (Sen, 1983) and more generally for the definition and measurement of the standard of living (Sen, 1987a). Here it is suggested that Basic Capabilities is a novel way of specifying health equity objectives, how we should go about attaining them and how progress should be monitored, while at the same time sharing some common themes with mainstream health economics. It thus warrants much closer attention by economists with an interest in the health inequality debate.

Sen's rationalization for focusing on capabilities actually derives from weaknesses inherent in the Rawlsian and Utilitarian approaches. The first is said to suffer from goods fetishism: a focus on the goods rather than what they can do for people. To take the example of health care, it is generally acknowledged that people do not demand the good in itself, but rather for what it may contribute to health. It is the opportunities it provides for pursuing a healthy life which matters. Utilitarianism is, of course, concerned with what goods do to people but it uses a measure which overly focuses on mental and emotional reactions to those goods. Arguably, non-utility information is equally as important and this requires that the central focus of analysis be on a much wider range of variables which explain what commodities do for people and how people use them to produce human activities.

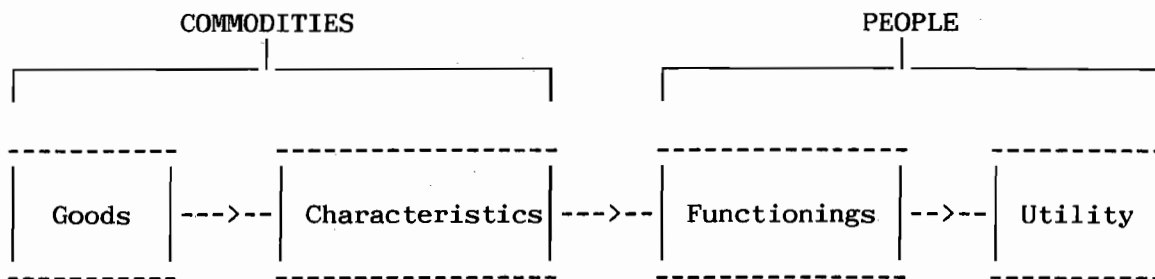
The argument can be exemplified through Figure 2 which shows the chain from goods to utility. On the left hand side is the world of commodities which has been the traditional focus of economics when discussing questions of distribution (ie. the non-envy approach). These commodities are transformed into more fundamental intermediate products, which Sen in common with Lancaster's (1966) pioneering approach calls characteristics. A focus on characteristics would lead one to interpret the demand for health care as a demand for factors such as clinical efficacy, caring by the GP and so on. Moving to the world of people, how individuals use characteristics of goods to produce human activities is described by Sen as functionings (ie. earning one's living, following leisure pursuits, being in good health, etc.).¹⁶ Most economists would typically regard the link from functionings to utility as unproblematic. Sen disagrees, arguing that although higher levels of utility are associated with better functionings the connection is by no means straightforward. For instance, suppose we were faced with the problem of distributing resources between Ann who despite being physically disabled has an invariably optimistic disposition and Bob, who suffers from no particular ailment, has a high marginal utility of income, but is essentially pessimistic at heart so that in terms of total utility he is actually worse off than Ann. Focusing on utility would lead to a preferential allocation to Bob which does not seem very fair. The reason is, of course, that what most would acknowledge to be Ann's greater needs no-where figure in the analysis. Concentrating on functionings, on the other hand, makes the interpretation of need paramount and allows it to be incorporated as non-utility information. There are echoes here of the

16. Culyer (1989a), whilst not dissenting from Sen's reasoning, argues that a more useful terminology is to express functionings as being the 'characteristics of people'.

long standing advertence by health economists that needs must be seen as instrumental to the accomplishment of a desired end-state (in the example above, being able to move from one place to another) and that the success of health policy should be measured "in terms of changes in individual attributes" (Culyer, 1980).

FIGURE 2

The chain from goods to utility



Source: Sen (1980)

Sen further argues that in terms of equity our interest is less in whether a person is functioning in a certain way and more on whether that individual has the capability to do so. Hence the guiding equity principle being 'equality of basic capabilities'. This argument is reflected in health-equity concerns where policy objectives are usually stated in terms of a persons access to health care rather than their utilization. A focus on functionings could imply that a person should be continuously using medical services, whereas the crucial idea is that they should be able to, when they choose so to do. This choice element is held to be generally important, although far less so in the universe

of *basic* capabilities in which Sen includes such things as abilities to meet one's nutritional requirements, to be clothed and sheltered and, significantly for our purposes, to enjoy good health. In economic terms this suggests that it is the extent of people's opportunity set rather than simply the point in it that happens to be chosen which is important. Thus, there are similarities with Le Grand's equity account, the significant distinction being that whereas Le Grand defines choices over goods, the present approach emphasises what the goods can do for people and what people are able to do with them.¹⁷

A clearer impression of what the capabilities framework implies can be gathered with the help of some notation and specification.¹⁸ Assume the partial equilibrium space of the particular functioning "good health" and consider

- x_i = the vector of health-related commodities possessed by the representative individual i ,
- $c^{(*)}$ = a function converting a commodity vector into a vector of characteristics of those commodities,
- $f_i^{(*)}$ = a production possibility function transforming characteristics into functionings,
- F_i = the set of production functions f_i , any one of which may be chosen by person i .

 17. It will be noted, of course, that Sen's framework clarifies the weakness highlighted in Le Grand's diagrammatic exposition. Since health is best seen as a functioning, commodities or their characteristics are what are required to alter that functioning should its distribution be judged inequitable. Hence, there does not seem to be much sense in trading off cigarette consumption with health.

18. An alternative more comprehensive exposition in multi-functionings space is provided in Sen (1985): Chapter 2.

If i chooses f_i^* , then given x_i the achieved health state is given by the vector h_i ,

$$h_i = f_i(c(x_i)). \quad (1)$$

Now allow that the functioning vector can be mapped into a numerical representation of well-being through v_i^* , the valuation function of person i ,

$$v_i = v_i(f_i(c(x_i))). \quad (2)$$

If one is interested in the well-being of person i then its measurement can plausibly be seen as an evaluation of h_i , indicating his/her health status in terms of Quality Adjusted Life Years, for example. Similarly, a summation of all h_i 's would provide the community health index.

For a given commodity vector x_i feasible functionings are defined by the set $P_i(x_i)$,

$$P_i(x_i) = [h_i \mid h_i = f_i(c(x_i)), \text{ for some } f_i^* \in F_i] \quad (3)$$

If the person's choice of commodity vectors is restricted to the set X_i , then his/her functionings are given by the set $Q_i(X_i)$,

$$Q_i(X_i) = [h_i \mid h_i = f(c(x_i)), \text{ for some } f_i^* \in F_i \text{ and} \\ \text{for some } x_i \in X_i] \quad (4)$$

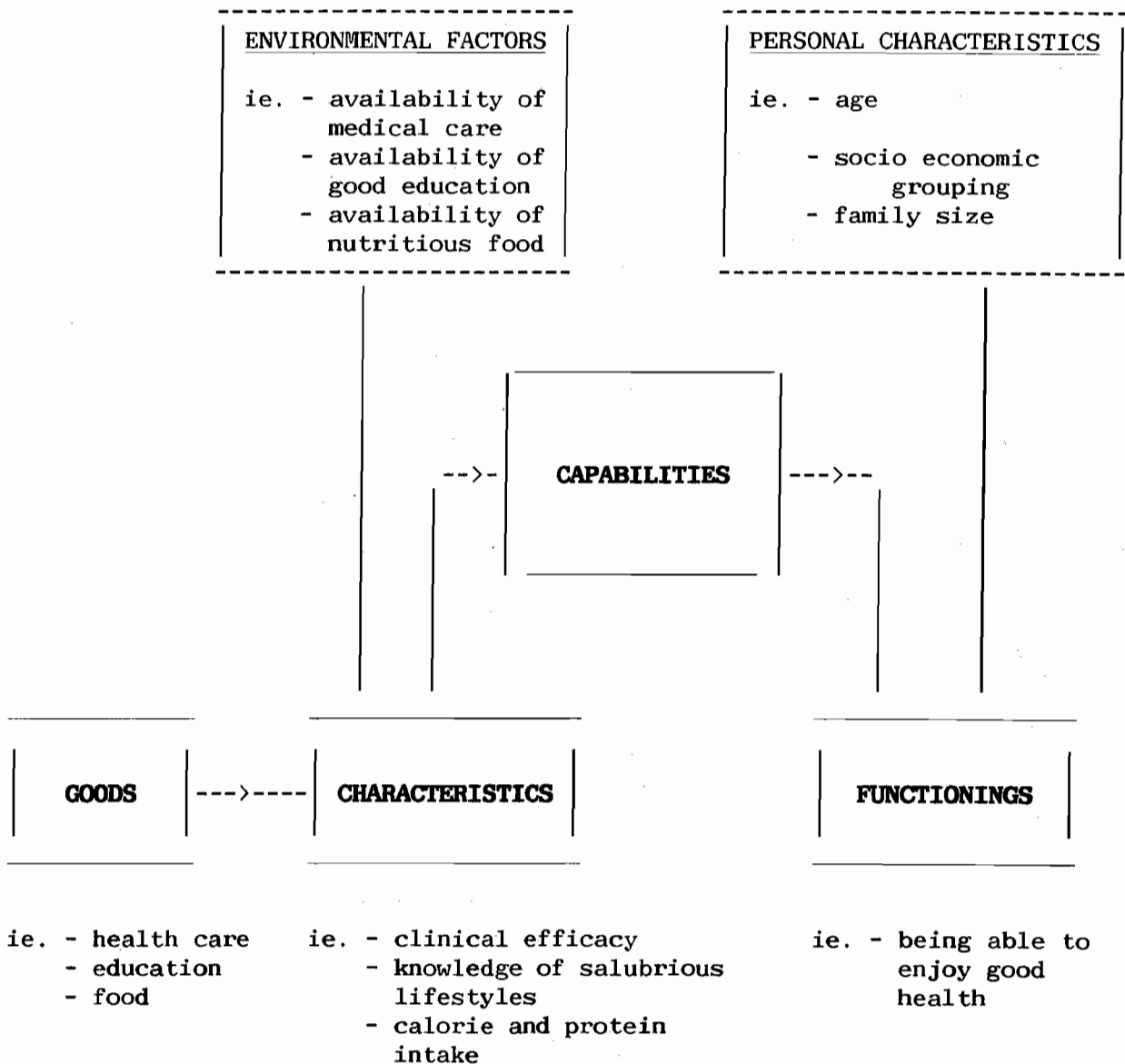
Equation (4) represents the freedom or opportunity that a person has in choosing the functioning 'good health', given his/her personal features, F_i , and command over commodities, X_i . Therefore, Q_i may be interpreted as the capability of person i to generate the desired function.

If one is interested in the equity of a particular distribution the task for positive analysis becomes the identification of set Q_i compared with Q_j , the capability set of person j . If $Q_i = Q_j$ then a situation is considered equitable. Should such an empirical task prove overly ambitious given the lack of suitable information for all the variables in the sets F_i , F_j , X_i , X_j then an 'all-or-nothing' approach does not seem justified. One might reasonably opt for a partial analysis which concentrates on identifying a particular aspect of the capability set, say the opportunity a person has in choosing a desired function through command over a specified commodity such as health care. For the valuation to have content it need not necessarily have to generate *complete* orderings. It would make a great deal more sense to accept a partial ordering than to insist on logical completeness and be left with complete lack of information.

Figure 3 presents a schematic view of the production of the functioning 'good health' and provides further insight into the question of equity in the health domain. Health status depends on the capabilities to function which people have available to them. These capabilities are in turn determined by goods (ie. health care, education, food) or more directly by the characteristics of goods (clinical efficacy, knowledge of salubrious lifestyles and calorie and protein intake, for example). In an important sense the characteristics of goods

FIGURE 3

The Production of Health
in Sen's Basic Capabilities Framework



are related to environmental factors (availability of medical care, good education, and nutritious food, for example) whilst functionings are related to personal characteristics (ie. age, socio-economic grouping, family size, etc). Thus whether an individual is capable of achieving good health will depend on his access to health producing goods and his endowment of health producing personal characteristics, which is itself partly determined by access to commodities. In short, with regard to equity, equality of capabilities implies equal access to health benefits. This seems to be a particularly useful interpretation of the Portuguese Constitutional health equity objective (Pereira, 1988b).

There are also important implications in Sen's approach for economic analysis. It has much in common with models of household production which derive from Becker (1965). This work has considered the importance of inputs such as time and environmental constraints in the production of fundamental utility-yielding commodities. In Grossman's (1972) model of the demand for health individuals produce durable health capital which may be accumulated and at the same time may require maintenance through investment in non-genetic human characteristics and the characteristics of goods. The fundamental commodities produced by households - being able to work, to enjoy life, etc. - coincide for all intents and purposes with Sen's functionings. In household production models fundamental commodities are produced from market goods, environmental inputs and personal characteristics, which as Figure 4 shows are the source of the capability set. What distinguishes the two approaches is that writers in the human capital tradition would normally not consider the link from functionings to utility as problematic. Sen on the other hand, emphasises that any two individuals, or the same

individual at different times, may make identical choices when faced with the same capability set and yet may experience quite different utility levels. Therefore our focus should be on the capability set. Muellbauer (1987) argues that in empirical analysis this problem is not unsurmountable : "What is important is that the relationships determining the capability set are relatively universal and that the determining variables and the chosen functionings are relatively observable."

Therefore, there seems to be much in Sen's formulation to recommend it and also an idea of how it might usefully be applied in positive analysis. As in Le Grand's equity as choice framework, however, inevitable problems will be raised in the definition of what is attributable to choice (ie. individual tastes) and what to constraints (in the Sen framework, the capability set). There is an implicit argument that in the case of capabilities to achieve basic functionings (such as good health) the role of choice will be restricted, although many would probably want to give it more prominence than Sen. Culyer (1989a) puts his finger on the problem when he suggests that it may be more prudent to use the general notion of the 'characteristics of people' rather than 'basic capabilities' since the former does not exclude 'a priori' some characteristics (whatever they may be) whereas the latter clearly does. Ultimately, one would need to look at what a particular society reveals as being important. Furthermore, since such an exercise is linked to the extent of choice and significance of constraints it is inevitably a question to which one must return in positive analysis.

6. Concluding comments

In this paper I have reviewed normative aspects of the health inequality debate which only very recently have begun to be addressed by economists and other social scientists. This is despite wide agreement that grasping their implications is a prerequisite for understanding why people are concerned about inequality, how it should be measured, what causes it and how policies may be formulated and monitored. Although I have sought primarily to identify economic conceptions of equity which reflect the objectives of Portugal's health system, the discussion is also relevant to other countries. Far too much research on health inequalities has tended to put the cart before the horse, identifying unequal distributions without considering if they are at the same time inequitable. It would be heartening to see future empirical work either preceded or related to the health equity objectives which particular countries reveal and interpreted in the light of rigorous normative formulations. Economists have a particularly important role to play, given longstanding traditions in 'welfare' economics in specifying equity objectives in a form that renders them amenable to positive analysis.

Given that no consensus definition of equity has emerged in the literature the most immediate task has been to critically review available conceptions in terms of their suitability for informing the health-equity debate. Sen's capabilities framework comes closer to achieving all previously specified standards. This does not mean that important insights cannot be extracted from the other formulations or that these are irrelevant for the equity in health debate. Further refinement of the health maximization approach in particular could yield

results of great significance. For the moment, however, it is not at all clear that it can serve as a suitable guide to empirical evaluation of Portugal's health-equity objectives. It seems to be largely uninformative with regard to the comparison of interpersonal feasibility of attaining rewards and does not focus on the processes of health production and health care delivery which Portuguese objectives emphasise. Thus, although it has the logical advantage of treating efficiency and equity attainment in a single policy step it is silent on particular aspects of the equity problem. Sen's framework has most obvious advantages in these respects and consequently appears the more fruitful as a basis for positive analysis of specifically equitable objectives. Strangely, thus far it has been virtually ignored by health economists. Future work should devote greater attention to establishing its theoretical foundations in the health sphere and above all to developing the link between normative and positive analysis.

References

- AHMED, P.I.; COELHO, G.V. (1979) (eds.) Toward a New Definition of Health: Psychological Discussions. Plenum Press, New York and London.
- ARCHIBALD, G.C.; DONALDSON, D. (1979) 'Notes on economic equality' Journal of Public Economics, Vol. 12, no. 2, pp. 205-214.
- ARROW, K.J. (1963) 'Uncertainty and the welfare economics of medical care' American Economic Review, Vol. 53, pp. 941-973.
- ATKINSON, A.J. (1982) Social Justice and Public Policy. Harvester Press, Brighton.
- ATKINSON, A.J. (1987) 'Economics of the Welfare State: introductory comments' European Economic Review, Vol. 31, pp. 171-181.
- BAUMOL, W.J. (1986) Superfairness: Applications and Theory, The MIT Press, Cambridge, Mass.
- BECKER, G. (1965) 'A theory of the allocation of time' Economic Journal, Vol. 75, pp. 493-677.
- BELL, J.M.; MENDUS, S. (1988) Philosophy and Medical Welfare. Cambridge University Press, Cambridge.
- BIRCH, S. (1987) The Demand for Health: Extensions to the Human Capital Model. Unpublished DPhil thesis, University of York.
- BROOME, J. (1988) 'Good, fairness and QALY's' In: J.M. Bell; S. Mendus (eds.) Philosophy and Medical Welfare. Cambridge University Press, Cambridge.
- CARR-HILL, R. (1988) 'QuALitY control: a sensitivity analysis of QALY's' Paper presented to the Meeting of the Health Economists Study Group, University of Brunel, July.
- CULYER, A.J. (1970) 'The nature of the commodity "health care" and its efficient allocation' Oxford Economic Papers, Vol. 23, no. 2, pp. 189-211.
- CULYER, A.J. (1971) 'Medical care and the economics of giving' Economica, Vol. 38, no. 51, pp.295-303.
- CULYER, A.J. (1976) Need and the National Health Service. Martin Robertson, London.
- CULYER, A. J. (1980) The Political Economy of Social Policy. Martin Robertson, Oxford.
- CULYER, A.J. (1988) 'Inequality in health services is, in general, desirable' In: D.J. Green (ed.) Acceptable Inequalities? The IEA Health

Unit, London.

CULYER, A.J. (1989a) 'Commodities, characteristics of commodities, characteristics of people, utilities and the quality of life' In: S. Baldwin; C Godfrey; C. Propper (eds.) The Quality of Life: Perspectives and Policies. Routledge & Kegan Paul, London.

CULYER, A.J. (1989b) 'The normative economics of health care finance and provision' Oxford Review of Economic Policy, Vol. 5, no. 1, pp. 34-58.

DANIELS, N. (1981) 'Health care needs and distributive justice' Philosophy and Public Affairs, Vol. 10, no. 2, pp. 146-179.

DARDANONI, V.; WAGSTAFF, A. (1987) 'Uncertainty, inequalities in health and the demand for health' Journal of Health Economics, Vol. 6, no. 4, pp.283-290.

DHSS (1980) Inequalities in Health. Report of a Research Working Group Chaired by Sir Douglas Black. DHSS, London.

DWORKIN, R. (1981) 'What is equality?' Philosophy and Public Affairs, Vol. 10, no.'s 3 and 4, pp.185-246 and pp.283-345.

ENTHOVEN, A. (1980) Health Plan: The Only Practical Solution to the Soaring Cost of Medical Care. Addison-Wellesley, Reading, Mass.

FELDMAN, A.M. (1987) 'Equity' In: J. Eatwell; M. Milgate; P. Newman (eds) The New Palgrave: A Dictionary of Economics. MacMillan, London.

FRIEDMAN, L.S. (1985) Microeconomic Policy Analysis. McGraw Hill Book Company, New York.

GREEN, D.J. (1988) Acceptable Inequalities? The IEA Health Unit, London.

GROSSMAN, M. (1972) The Demand for Health: A Theoretical and Empirical Investigation. National Bureau of Economic Research, New York.

HARRIS, J. (1987) 'QALYfying the value of life' Journal of Medical Ethics, Vol. 13, no. 3.

HARRIS, J. (1988) 'More and better justice' In: J.M. Bell; S. Mendus (eds.) Philosophy and Medical Welfare, Cambridge University Press, Cambridge.

HOCHMAN, H.H.; ROGERS, J.D. (1969) 'Pareto-optimal redistribution' American Economic Review, Vol. 59, no. 3, pp. 542-557.

ILLSLEY, R.; SVENSSON, P.-G. (1986) (eds.) The Health Burden of Social Inequities. WHO Regional Office for Europe, Copenhagen.

KLAPPHOLZ, K. (1972) 'Equality of opportunity, fairness and efficiency' In: M. Peston and B. Corry (eds.) Essays in Honour of Lord Robbins. Weidenfield and Nicolson, London.

LANCASTER, K. J. (1966) 'A new approach to consumer theory' Journal of Political Economy, vol.74, pp.132-157.

- LE GRAND, J. (1982) The Strategy of Equality: Redistribution and the Social Services. George Allen & Unwin, London.
- LE GRAND, J. (1984) 'Equity as an economic objective' Journal of Applied Philosophy, Vol. 1, no.1, pp. 39-51.
- LE GRAND, J. (1986) 'Inequalities in health and health care: a research agenda' In: G. Wilkinson (ed.) Class and Health: Research and Longitudinal Data. Tavistock, London.
- LE GRAND, J. (1987) 'Equity, health and health care' In: "Three Essays on Equity" SunTory Toyota International Centre for Economics and Related Disciplines: Welfare State Project. Discussion Paper no. 23. London School of Economics and Political Science.
- LINDSAY, C.M. (1969) 'Medical care and the economics of sharing' Economica, Vol. 36, no. 144, pp.351-362.
- LOEWY, E.H. (1987) 'Communities, obligations and health care' Social Science and Medicine, Vol. 25, no. 7, pp. 783-791.
- LOOMES, G. (1988) 'Disparities between health state measures: an explanation and some implications' Paper presented to the Meeting of the Health Economists Study Group, University of Brunel, July.
- MARGOLIS, H. (1982) Selfishness, Altruism and Rationality. Cambridge University Press, Cambridge.
- McLACHLAN, G.; MAYNARD, A. (eds.) (1982) The Public/Private Mix for Health. Nuffield Provincial Hospitals Trust, London.
- MOONEY, G.H. (1983) 'Equity in health care: confronting the confusion' Effective Health Care, Vol.1, no. 4, pp.179-185.
- MOONEY, G. H. (1986) Economics, Medicine and Health Care. Wheatsheaf Books, Brighton.
- MOONEY, G.H. (1987) 'What does equity in health mean?' World Health Statistics Quarterly, no.4.
- MOONEY, G.; McGUIRE, A. (1987) 'Distributive justice with special reference to geographical inequality and health care' In: A. Williams (ed.) Health and Economics. MacMillan, London.
- MUELLBAUER, J. (1987) 'Professor Sen on the standard of living' In: A. Sen, The Standard of Living. Cambridge University Press, Cambridge.
- NOZICK, R. (1974) Anarchy, State and Utopia. Basic Books, New York.
- O'HIGGINS, M. (1987) 'Egalitarians, equalities and welfare evaluation' Journal of Social Policy, Vol. 16, no.1, pp.1-18.
- PAZNER, E.A.; SCHMEIDLER, D. (1978) 'Egalitarian equivalent allocations: a new concept of economic equity' Quarterly Journal of Economics, Vol. 92, no. 369, pp. 671-687.
- PEREIRA, J. (1988a) 'Equity in health and health care: an overview of

normative issues with special reference to Portugal' University of York, mimeo, March.

PEREIRA, J. (1988b) 'Social justice and equity in health in Portugal' Estudos de Economia, Vol. 8, no. 4, pp. 345-364.

RAWLS, J. (1971) A Theory of Justice. Harvard University Press, Cambridge, Mass.

ROEMER, J. (1986) 'Equality of resources implies equality of welfare' Quarterly Journal of Economics, Vol. 101, pp. 751-784.

SEN, A. (1973) On Economic Inequality. Clarendon Press, Oxford.

SEN, A. (1977) 'Rational fools: a critique of the behavioural foundations of economic theory' In: Choice, Welfare and Measurement. Basil Blackwell, Oxford, 1982, pp. 84-106.

SEN, A. (1980) 'Equality of what?' In: Choice, Welfare and Measurement, Basil Blackwell, Oxford, 1982, pp. 353-369.

SEN, A. (1983) 'Poor, relatively speaking' Oxford Economic Papers, Vol. 35, pp. 153-169.

SEN, A. (1985) Commodities and Capabilities. North Holland, Amsterdam.

SEN, A. (1987a) 'Justice' In: J. Eatwell; M. Milgate; P. Newman (eds.) The New Palgrave: A Dictionary of Economics. MacMillan, London.

SEN, A. (1987b) The Standard of Living. Cambridge University Press, Cambridge.

SLOAN, F.; BENTKOVER, J.D. (1979) Access to Ambulatory Care and the U.S. Economy. Lexington Books, Lexington, Mass.

SMITH, A. (1987) 'Qualms about QALY's' The Lancet, vol. 1, p. 1134.

TOBIN, J. (1970) 'On limiting the domain of inequality' Journal of Law and Economics, Vol. 13, pp. 263-277.

VARIAN, H.R. (1974) 'Equity, envy and efficiency' Journal of Economic Theory, Vol. 9, pp. 63-91.

VEATCH, R.M. (1982) 'Ethical dimensions of the distribution of health care' In: J. van der Gaag; W.B. Neenan; T. Tsukahara (eds.) Economics of Health Care. Praeger, New York.

WAGSTAAF, A.; VAN DOORSLAER, E.; PACI, P. (1989) 'Equity in the finance and delivery of health care: some tentative cross-country comparisons' Oxford Review of Economic Policy, Vol. 5, no. 1, pp. 89-112.

WEST, P. (1986) 'What is wrong with QALY's?' Paper presented to a meeting of the Health Economists Study Group, University of York, January.

WILLIAMS, A. (1988) 'Ethics and efficiency in the provision of health care' In: J.M. Bell and S. Mendus (eds.) Philosophy and Medical Welfare. Cambridge University Press, Cambridge.

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