



ESSAYS ON POVERTY  
AND  
NORMATIVE ECONOMICS

by

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A dissertation submitted for the degree of dr.oecon.

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**To my mother and father, with love**

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# 1

## Introduction

*I said nothing. She lifted me on to her shoulder. I could still see the head of the woman. I could still hear the voices of passionate gardens, could still hear their sunflower cantatas. I saw delicious girls dancing tarantellas in fields of comets. The woman's head turned to give me a last smile before she vanished altogether in a Milky Way of Music. The air became void of riddles. I heard the last notes of a flute adagio floating across a lake of green mirrors. Mum took me home over the mud and wreckage of the street, over the mild deluge, under an arpeggio of watery stars. She was silent. I smelt the gutters, and the rude plaster of the corroded houses. Then all I was left with was a world drowning in poverty, a mother-of-pearl moon, and the long darkness before dawn.<sup>1</sup>*

### 1. On the General Strategy

The underlying aim of the six essays in this thesis is to contribute to further understanding of the problem of poverty. That is needed in a world where 494 million individuals are deprived of adequate diet and a much larger number of people suffer from inadequate shelter and clothing.<sup>2</sup> In these introductory remarks, though, I shall not ponder on whether I have succeeded or failed in adding some relevant knowledge to the debate on this problem, but rather sketch the general strategy of the thesis.

I am concerned about the fact that many people are suffering immensely, and so are most other people that I discuss this issue with. In my view, this concern reflects (at least partly) the acceptance of some deeper ethical values, and, thus, is not only the image of a particular taste. (In the words of Bertrand Russell, I find myself incapable of believing that all that is wrong with the problem of poverty is that we do not like

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<sup>1</sup> B. Okri, *The Famished Road* (London: Jonathan Cape, 1991), p. 308.

<sup>2</sup> FAO, *Fifth World Food Survey* (Rome: FAO, 1985).

it.<sup>3</sup>) In the thesis, then, I aim to clarify these underlying ethical values, and, moreover, elaborate on how to formalise the various normative positions that we may take up in a discussion of this problem.

The clarification of the underlying values of the concept of poverty may serve various purposes. First, and most important, it makes transparent the inevitable connection between this topic and normative reasoning. A characterisation of the problem of poverty needs to take place within a normative framework, and the normative framework that we take up in this debate will define the concept of poverty. Second, a clarification of the various feasible normative positions may reveal an overlapping consensus on certain aspects of the problem, and may, thereby, indicate a fruitful starting point for further discussion. Finally, a deeper understanding of the internal structure of the various positions can elucidate the implications of the problem of poverty for individual and social choices, and, thereby, contribute to a discussion of consistency in individual behaviour and public policy.

Some formalisation may be needed in a discussion of the internal structure of a normative framework. A normative position may be characterised by certain axioms, and formal reasoning may contribute to reveal a tension between various seemingly appealing axioms. Thus, in some cases, a rigorous analysis may demand us to reconsider our present position on normative questions, and, thereby, contribute to an improved understanding of the line of reasoning at issue. Moreover, a formal representation of the underlying normative framework is needed in order to be able to measure the problem of poverty. In this process, the demand for precision may clarify substantial difficulties that may easily be overlooked in an informal discussion, that may be, by way of illustration, the complexity of the concept of well-being and the difficulty of claiming completeness in normative considerations.

Hence, the general strategy of this thesis is to throw some light on the fundament of the idea of poverty by pursuing clarification and formalisation of underlying ethical values. This project involves considerations of various related matters, and I shall in the following elaborate somewhat on the content of the six essays.

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<sup>3</sup> See D. Wiggins, *Needs, Values, Truth* (Oxford: Blackwell, 1987) for a discussion of the view of Russell.



## 2. On the Content

In the first essay - 'The Concept of Poverty and Normative Reasoning' - I consider the concept of poverty within various deontological and teleological frameworks. In each case, I indicate a possible interpretation of the poverty line. Within the classical utilitarian framework, the poverty line may be interpreted as a criterion for selecting out a group of people with particularly intense desires; within the Kantian framework it may be interpreted as a criterion for selecting out the group of people who experience situations where they are treated merely as means. Thus, our concern for the problem of poverty may reflect a concern for the absence of goodness and presence of badness in some people's lives (which we may assume are indicated by the presence of intense desires) or for the presence of unfairness in society (which we may assume is indicated by the fact that some people are treated merely as means). Evidently, these two approaches may overlap in the identification of the poor population, but, nevertheless, they represent rather different positions on this issue.

The Kantian criterion is rather vague, and in the essay I pursue a further understanding of this criterion within the framework of Rawls.<sup>4</sup> Inspired by the second principle of justice of Rawls, I suggest to define people as poor (in the context of resource allocation issues) when they have less than a reasonable share of the resources in society. Obviously, the further question is how to define a reasonable share of the resources, and in this respect I consider the problem of acquiring plausible assumptions on the length of the period of time over which this definition ought to cover and on the appropriate spatial perspective for the Rawlsian framework. I have no definite results to offer, but I believe that the essay sketches a reasonable framework for this type of discussions.

'Rationality, Value, and Well-Being', the second essay of the thesis, is only indirectly related to the problem of poverty. The essay aims to validate the possibility of making interpersonal comparisons of well-being, which is an important premise for any discussion of the idea of poverty. The strategy of the essay is to indicate the close link between the conventional framework of rational choice theory and a reasonable framework for interpersonal comparisons of well-being. It is argued that the line of reasoning of pure positivism has to be abandoned in a discussion of the underlying

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<sup>4</sup> J. Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971) and *Political Liberalism* (New York: Columbia University Press, 1993).

foundation of rational choice theory, and that the appropriateness of the axioms of consistency and completeness (at least partly) depends on whether or not people believe that there are valuable and disvaluable objects in life.

In general, it seems reasonable to claim that most people are not ethical nihilists, and, thus, it becomes of a certain interest to discuss the perceived nature of the valuable and disvaluable objects. Two conclusions emerge from debating this issue in the essay. First, the axiom of completeness in rational choice theory is less innocuous than frequently assumed; people probably face non-trivial choices where there is no 'best' element in the set of alternatives. Second, the unrestricted desire theory does not offer an adequate understanding of the concept of well-being, because there are many other objects (than desire fulfilment) that belong to the realm of value.

Both conclusions are important for a discussion of interpersonal comparisons of well-being. The presence of incompleteness should make us more humble in debating this question, and cause us to avoid a one-dimensional delineation of the concept of well-being. On the other hand, the rejection of the unrestricted desire theory as an appropriate representation of the concept of well-being should lead us to reject the claim of the ordinalists (to wit that we are unable to make meaningful interpersonal comparisons of well-being). We can observe the presence or absence of many valuable and disvaluable objects in a person's life, and, therefore, we can make reasonable statements on this issue. In particular, the claim of the ordinalists seems outlandish in a discussion of immense suffering and destitution, and, thus, the problem of interpersonal comparisons of well-being should not pose a problem for our discussion of these issues.

The link between the idea of poverty and the Rawlsian framework is discussed further in the third essay - 'The Distribution Problem and Rawlsian Reasoning'. The main claim of this essay is that the second principle of justice of Rawls has been wrongly translated in the formal literature on welfare economics and social choice theory. The second principle of justice is concerned with the well-being of the least advantaged segment, and, thus, does not - as frequently argued - assign dictatorial power to the person in the worst-off position in society. This distinction is important, and the focus on a *leximigroup rule* makes the Rawlsian position more plausible than it is in the 'disguise' of the conventional *leximin* rule.

However, there is a difficulty with this approach, to wit how to understand the least advantaged segment in society. Various definitions are considered in the essay, but it turns out that there is only one line of reasoning that makes the Rawlsian leximin group rule a genuine alternative to the leximin rule. This line of reasoning imposes an external cut-off line defined on income on the analysis (i.e. a cut-off line that is independent of the income distribution under consideration), and identifies the least advantaged segment as those who have less income than this minimum stipend. Within the Rawlsian framework, the appropriate level of the minimum stipend is to be decided in a primordial position of equality, but this issue is not pursued further in the essay. (The claim of Rawls on this issue is that the minimum stipend is to be considered as the level of income above which any further income is of no fundamental importance in the lives of people.)

The minimum stipend may be interpreted as a poverty line, where people below this line are poor because they lack a reasonable share of the resources in society. Hence, the Rawlsian leximin group rule represents a position where the improvements in the conditions of the poor are assigned lexicographic priority in social choices. However, in general we should not expect agreement on the weight that ought to be assigned to the interests of the least advantaged segment in society, and, thus, it is of importance to outline an approach to the poverty problem that may embrace various positions on this issue. That is the aim of the next two essays - 'On Subgroup Consistency in Poverty Measurement' and 'A New Approach to Normative Poverty Measurement' - where the clarification of a general basis for a normative representation of the problem of poverty is pursued (without considering how the fact that some people in society may enjoy a high level of well-being should be taken into account in a comprehensive social welfare judgement).

'On Subgroup Consistency in Poverty Measurement' clarifies a misunderstanding in the present poverty measurement literature. It has been claimed that the Sen-measure and its variants are not well suited for poverty analysis, because they violate the subgroup consistency axiom.<sup>5</sup> However, this claim is unfounded, and the underlying line of reasoning is based on a misrepresentation of the approach of Sen. The concept of reference group plays an important role in the Sen-measure, by defining the structure of the physical and psychological interconnections in the society in question.

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<sup>5</sup> See Foster, J., Greer, J., and Thorbecke, E., "A Class of Decomposable Poverty Measures" *Econometrica*, 42 (1984) and Sen, A., "Poverty: An Ordinal Approach to Measurements", *Econometrica*, 59 (1976).

In the approach of Sen, it is assumed that the well-being of a person depends on the well-being of the other members of the reference group. Thus, it is necessary in a discussion of this framework to make the appropriate distinction between subgroups and reference groups, and by doing that in this essay, I prove that the Sen-measure is a subgroup consistent poverty measure. Moreover, I extend the framework to also cover cases which innate a complex structure of reference groups.

The present poverty measurement literature faces some deep difficulties, and in 'A New Approach to Normative Poverty Measurement' I outline a framework that deals with these problems. First, the suggested framework provides a reasonable approach to the measurement of poverty in cases where population size differs; second, it clarifies the distinction between factual and normative considerations in poverty measurement; third, it makes cardinalisation of poverty measurement more relevant by reporting on the problem of poverty in an intuitively appealing way; fourth, it adds understanding to the question about discontinuity at the poverty line, and allows for flexibility in the analysis on this issue; fifth, it provides a cardinal understanding of the parameter values present in normative poverty measurement, and, sixth, it outlines a cardinal complement to the traditional approach on ordinal poverty rankings. In sum, these improvements contribute to alleviate the present arbitrariness in normative poverty measurement, by making it possible to people to respond to normative choices in poverty measurement in a way that is in compliance with their normative position on this issue.

The thesis is closed by the essay - 'Distant Suffering and Morality' - where I ponder on the complexity surrounding my (and, I believe, many other people's) internal conflict about suffering in the poor parts of the world. In this context, I discuss four sources of moral motivation - sympathy, mutual advantage, value, and the desire for justification - and indicate how these various sources differ in their implications for our moral obligations towards distant suffering. The discussion underlines the importance of establishing international institutions that can commit us to the moral obligations that we endorse when we take up the impersonal standpoint, and, moreover, stresses the relevance of making leeway for moral reflection in our lives.

## 2

# The Concept of Poverty and Normative Reasoning<sup>1</sup>

### 1. Introduction

In 1989, the Secretary of State for Social Security in Britain argued - in a speech called 'The End of the Line for Poverty' - that poverty had been abolished, and that it made no sense to use the word in a characterisation of the situation among people in the lower tail of the income distribution in Britain.<sup>2</sup> On the other hand, it has for example been argued by Townsend that as many as one in seven Britons were in poverty in the sixties.<sup>3</sup> (Certainly, the development in Britain has been remarkable if both these claims are true!) Finally, by applying the poverty standard of the European Commission, Blackburn has classified 9.2 percent of today's population in Britain as poor - a far cry from the statement of the Secretary of State.<sup>4</sup>

These differences reflect deviating definitions of the concept of poverty, and, hence, it seems of interest to ask what an appropriate foundation for this concept may be. Poverty denotes the lack of something, but the word itself does not impose any particular interpretation. However, the fact that poverty implies deficiency indicates the need for *a norm of completeness* in order to make sense of the concept. In this essay I discuss, within various normative frameworks, plausible interpretations of the norm of completeness or what I henceforth will call *a poverty line*. That is, I pursue interpretations of the concept of poverty to which normative force can be assigned,

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<sup>1</sup> For their comments on this essay, I am grateful to Rune Jansen Hagen, Ottar Mæstad, Agnar Sandmo, and Svein Aage Aanes.

<sup>2</sup> See Atkinson (1993).

<sup>3</sup> Townsend (1962). Moreover, Beckerman and Clark (1982) estimate that the number of poor people in Britain went up by about 59% in the period 1961-76.

<sup>4</sup> See Blackburn (1994). According to the poverty standard of the European Commission, persons with less than 50 percent of the median disposable income of the country in question are classified as poor. This poverty line is closely related to the so-called Fuchs criterion; see Rawls (1971), p. 98.

and which thus also can explain why people often attach particular importance to the extent of poverty in social welfare judgements.

Some readers may be surprised by the amount of effort I put into this discussion, (probably) because they endorse a straightforward interpretation of poverty as the lack of basic needs. But to appeal to basic needs does not provide a solution to the main concern of this essay, because there must still be a norm of completeness to defend in order to make sense of the idea of basic needs. Various interpretations of basic needs have been advanced in the poverty measurement literature, but there have been few attempts to explicitly link these definitions to any particular normative framework.<sup>5</sup> One line of reasoning has been to argue that basic needs ought to be defined as the amount of resources needed for survival, and this criterion (which undoubtedly needs further clarification) has provided a foundation for various nutritional cut-off lines.<sup>6</sup> Others have appealed to a more comprehensive definition of poverty, where the idea has been to express basic needs as the amount of resources needed in order to attain a minimum standard of living (and not merely survival).<sup>7</sup> But what is a minimum standard of living? A wide range of suggestions has been advanced - with some convergence on content - but a deep disagreement has prevailed about whether we should accept a relativist or an absolutist approach to the definition of basic needs.<sup>8</sup> The absolute-relative dispute is also the core of the conflict in the discussion of the extent of poverty in Britain. My claim, though, is that in order to make sense of this debate, we have to outline a normative framework within which the various suggestions - narrow and comprehensive - may be evaluated.

Hence, the primary idea of the essay is very simple: There must be some reasons why the idea of poverty is a major evaluative concern in most countries, and each of these reasons may provide the foundation of a corresponding conceptualisation of poverty. The weight people attach to reported poverty figures should, therefore, reflect the importance they assign to the underlying foundation of that poverty line. Thus, in this essay, I elaborate on various normative ideas that may support the concept of poverty,

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<sup>5</sup> Braybrooke (1987) and Wiggins (1987) are two exceptions.

<sup>6</sup> Dasgupta (1993), p. 437-473, surveys many of the conceptual problems with this approach.

<sup>7</sup> See for example Squire (1993).

<sup>8</sup> See Braybrooke (1987), p. 34, for a discussion of various suggestions of a comprehensive definition of basic needs. See also Weigel (1986), who surveys recent advances within socio- and neurobiology, and discusses implications for a reasonable interpretation of the idea of poverty.

and sketch possible interpretations of the poverty line. In section 2, I briefly outline the general normative framework that supports the discussion. The most important part of this section is to clarify the structure of normative reasoning that is adopted in this essay, and to elaborate on the a priori assumption that justifies the relevance of normative reasoning. In section 3-6, I discuss various normative positions and their bearing on the idea of poverty, and in section 7, I debate the relevance of the absolute-relative dispute in the discussion of a sensible definition of poverty.

## 2. Some Basic Elements

A normative framework supports a particular ranking of states of affairs, where a state of affairs should be interpreted broadly by including "past actions, present actions, intended actions, Mother Nature's choice of actions, and the past, present, and future consequences of this stream of actions".<sup>9</sup> It is considered incontrovertible to presume that such a ranking will be consistent for any normative framework of interest, and I shall not deviate from the conventional position on this issue. However, it is more dubious to extend the assumption to include the property of completeness as well, a problem I shall elaborate on in the sections 4 and 5.<sup>10</sup>

At the risk of some oversimplification, we may say that there is one basic distinction between various normative theories. Choosing state of affairs *A* instead of state of affairs *B* can be defended by arguing either that there is more goodness in *A* than in *B* or that it is (for some other reason) morally wrong to prefer *B* to *A* (even if *B* should contain more goodness than *A*). The former argument is usually classified as teleological reasoning, i.e. that rightness is determined by goodness, the latter argument reflects a deontological view, i.e. that rightness is not necessarily to maximise goodness.<sup>11</sup> Thus, the idea of poverty may be interpreted either within a deontological or a teleological framework (or, as I discuss in section 5, within a framework that combines deontological and teleological reasoning). In other words, poverty can either be linked to the lack of goodness (or the presence of badness) in a

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<sup>9</sup> Dasgupta (1993), p. 29-30. See also the discussion of social states in Arrow (1963).

<sup>10</sup> See Tungodden (1994a) for a discussion of the properties of completeness and consistency in individual choices motivated by self-interest.

<sup>11</sup> There are numerous definitions of a deontological view. The definition referred to here is from Rawls (1971), p. 30, but see Scheffler (1982), Sen (1987), and Broome (1991).

state of affairs or to the wrongness in a state of affairs, and both possibilities are elaborated on in the essay.

But why are we interested in normative reasoning at all?<sup>12</sup> Why should we care about any normative interpretation of poverty? This is a difficult - but substantial - issue, though one I am unable to elaborate on in any satisfactory way here. However, it is important to notice that the reasoning in this essay is fundamentally different from the one pursued within the Hobbesian tradition. The Hobbesian framework assumes that "every man has a Right to every thing, even to another's body",<sup>13</sup> and rejects any further discussion of the idea of overall goodness and rightness. Hence, everyone simply ought to pursue their personal aims in a rational way (where these aims, of course, may be influenced by the sympathy they feel towards other people), and only co-operate if co-operation is rational. Thus, a normative framework is in the Hobbesian tradition only a device introduced in order to support an equilibrium - in the game of life - which is mutually advantageous for the members of society compared to a non-co-operative equilibrium.

The Hobbesian framework has been developed in various directions by the use of rational bargaining models, where the differences are primarily related to the specification of the non-co-operative equilibrium and the interpretation of the coordination mechanisms that will be applied by the members of society.<sup>14</sup> But common to all approaches within this tradition is the fact that they reject characterising any inequality between people, whether (by way of illustration) slavery or the presence of hunger in an affluent society, as intrinsically wrong or bad. No action has any inherent normative status, because there are no normative claims that ought to be taken into account in our lives. Equivalently, no experience has any inherent normative status, and, hence, we can not claim that, for example, undernourishment is intrinsically bad. Therefore, these models reject any normative understanding of poverty beyond the (possible) claim that this idea may reflect the lack of rational co-

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<sup>12</sup> Midgley (1991) argues that "we need priority-rules, not just because they make society smoother, nor even just to make it possible at all, but also more deeply, to avoid lapsing individually into states of helpless, conflict-torn confusion. In some sense, this is the 'origin of ethics' and our search need take us no further" (p. 11). See also Taylor (1993).

<sup>13</sup> Hobbes (1986), p. 190.

<sup>14</sup> See for example Gauthier (1986) and Binmore (1994). Gauthier works within a Lockean framework, and deduces a particular social contract that he claims people will find rational to endorse in every society. Binmore, on the other hand, underlines the importance of evolutionary forces in the construction of a social contract, and avoids the use of a fictitious description of the status quo.



ordination of activities among the members of society (where rationality has to be understood in the context of mutual advantage). One such rational co-ordination mechanism may, of course, be to establish conventions that define certain actions and experiences as 'wrong' and 'bad'.

The framework adopted in this essay, however, presumes a priori that we have "a desire to be able to justify [our] actions to others on grounds they could not reasonably reject".<sup>15</sup> Thus, we do not only occupy our own point of view when people's interests conflict, but aim at an understanding of how to balance - in a reasonable way - our own individualistic motives and interests against other people's motives and interests.<sup>16</sup> In other words, we pursue an appropriate normative framework which can guide us in cases of this type, and in that context, we speak about goodness and rightness. It would, of course, be somewhat naïve to believe that we all the time possess this desire to be able to justify actions to others. Almost every choice we make is a social choice in the sense that other people's interests are involved, though we are unable to take that fully into account in daily life, where individualistic motives and concerns often will dominate.<sup>17</sup> But this desire for justification may nevertheless be influential in the sense that it may be the foundation for social institutions. We may, through the state, commit ourselves to a particular normative framework, such that the state - as the institutionalisation of the legitimate use of force - can be understood as a mechanism for implementing the normative framework that the citizens endorse.<sup>18</sup> These remarks are all-too-brief about the link between personal ethics and social arrangements, but the intention here is only to indicate the importance of individual values in the construction of a sensible normative theory of social arrangements. A foundation for social arrangements ought to be derived from an understanding of what constitute reasonable personal ethics, and to separate these questions may easily lead to utopian social arrangements which

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<sup>15</sup> Scanlon (1982), p. 116. See also a similar discussion in Rawls (1993), p. 48-54 on the distinction between the rational and the reasonable, and Nagel (1991) on the distinction between the personal and the impersonal standpoint within each of us. A further difficulty is how to understand the relationship between the reasonable and the rational; on this issue see Nozick (1981) and Griffin (1986).

<sup>16</sup> See Tungodden (1994c) for a discussion of this problem in the context of distant suffering.

<sup>17</sup> There may also be very good reasons for neglecting the interests of others in particular situations, an issue which has been extensively discussed in social choice theory. See Sen (1970a) for a discussion of the Paretian Liberal.

<sup>18</sup> There are, of course, also other factors which ought to be taken into account in a more comprehensive discussion of the foundation of the state, for example, that the state can be the most efficient insurance mechanism, or the most efficient mechanism for expressing important symbolic values (on the latter issue, see Nozick (1989), chap. 25).

consistently are in conflict with what the citizens perceive as justifiable behaviour from the personal point of view.<sup>19</sup> The close connection between personal ethics and social arrangements is essential to a normative discussion of the concept of poverty, because the idea of poverty has deep roots in the design of social institutions. Hence, we need an understanding of the concept of poverty which, while being part of the foundation of social institutions, may co-exist with what we perceive as reasonable personal behaviour.

What, then, does a normative framework really express? It may be an objective ethical truth,<sup>20</sup> or it may be the less ambitious aim of being the most plausible conception of political values (i.e. individual values on relevant social choices) as the focus of an overlapping consensus.<sup>21</sup> But be that as it may, the purpose of this essay is to elaborate on the link between various normative frameworks and the concept of poverty, and for that task we do not have to state a position on metaethical issues. However, we shall notice that the line of reasoning adopted in order to defend a normative framework is dependent on the metaethical position.<sup>22</sup> Rational intuitionism appeals to an independent order of values that is to be recognised on due reflection, and where the fact that these values are true provides a sufficient foundation for justification.<sup>23</sup> Thus, from that position one will argue that a normative framework is to be accepted if its first principles appear to convey the true independent normative values (which are to be revealed and not constructed). On the other hand, one may argue along the lines of reasonable constructivism, where a normative framework is established by human reasoning, and as a result of a procedure of construction. In that case, it is the reasonableness of the procedure that is

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<sup>19</sup> See Sen (1992), p. 18-19, for a somewhat divergent position on this issue.

<sup>20</sup> For a defence of non-religious objective ethics, see (among others) Nagel (1979), p. 196-213, Nozick (1981), p. 400-402, and Parfit (1984), p. 452-454.

<sup>21</sup> See Rawls (1993), p. 89-130 for a discussion of this idea. Notice that there is a fundamental change in the reasoning on this issue from Rawls (1971) to Rawls (1993), where the later Rawls adopts the less ambitious aim of presenting a reasonable conception of political values, in contrast to the early Rawls who presents a proposal for an independent moral theory. The main structure of Rawls (1971) and Rawls (1993), however, is more or less the same.

<sup>22</sup> Here I draw on Rawls (1993), Lecture III. However, the term 'reasonable constructivism' is not suggested by Rawls, but introduced in my discussion in order to avoid any further elaboration on the distinction between 'moral constructivism' and 'political constructivism' (which are terms used by Rawls).

<sup>23</sup> Another possibility would, of course, be to relate the order of values to a religious doctrine, and utilitarianism was, for example, defended (in the 19th century) by William Paley because it reflected God's wishes. This kind of defence, though, was rejected by (for example) both Mill and Kant who argued that it must always be possible for us to ask whether God's commands are themselves good. See Ryan (1987), p. 19.

to be evaluated, and eventually improved upon in order to arrive at a plausible normative framework. And, of course, the conclusions derived from such a procedure may overlap with the normative ideas that rational intuitionists claim are a part of an independent order of values. Both arguments are present throughout this essay, though reasonable constructivism probably has the upper hand in most of the discussion.

Is it, then, possible to find any justifiable procedure that aggregates individual interests into a social ordering? (If so, then we may be able to find a normative basis for the concept of poverty.) The Arrowian framework, where an ordering of states of affairs is established from the ordering of states of affairs of the members of society, has been the point of departure for a considerable amount of normative reasoning.<sup>24</sup> The axioms proposed by Arrow suggest one possible normative position, and within this framework we arrive at the well-known result, Arrow's General Impossibility Theorem, that there is no social ordering satisfying these axioms. But this framework can be informationally enriched by admitting (partial or full) comparability of well-being levels, and social orderings may, then, be derived by entering into various normative positions.<sup>25</sup> In this essay, I ignore problems with respect to interpersonal comparisons of levels, gains, and losses of well-being, and within a setting of perfect information I discuss various feasible procedures of balancing individual interests.<sup>26</sup> This a priori assumption is undoubtedly controversial, but it nevertheless provides a useful point of departure for normative reasoning by allowing us to focus on disagreement of a fundamental normative character (by neglecting disagreements based on divergent assumptions about the amount of information available).

What may a reasonable procedure for balancing people's interests in social choices be like?<sup>27</sup> A frequently adopted approach (which at least can be traced back to Adam Smith) is to introduce a fictitious ideal actor in order to construct an impartial

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<sup>24</sup> Arrow (1963). See also Hylland (1986) for a discussion of the framework of social choice theory.

<sup>25</sup> Notice that there also is a close relationship between the degree of interpersonal comparability admitted and feasible ethical positions, see Sen (1977) and Deschamps and Gevers (1978). I discuss this issue further in Tungodden (1994b).

<sup>26</sup> See Sen (1970b) for a discussion of various issues on interpersonal comparisons of well-being.

<sup>27</sup> On this issue, see (among others) Dworkin (1978), Griffin (1986), Harsanyi (1953,1955), Kymlicka (1990), Nagel (1979), and Sen (1977, 1992). See Sugden (1993) for a critical view of this line of reasoning.

perspective, and then discuss how this person would respond to social choices.<sup>28</sup> Various interpretations of the ideal actor are presented throughout this essay, and, in each case, I explore whether the principle presumed endorsed by this ideal actor adds any normative understanding to the concept of poverty. If it does, then the importance of that particular normative interpretation of poverty will depend upon how successful the underlying interpretation of the ideal actor is in incorporating an impartial perspective which people (who endorse reasonable constructivism) find appropriate as a method of approaching social choices, and how the first principles of that framework appeal to our intuition on these questions.

Hence, in the next three sections I discuss various normative positions - teleological and deontological - which people who are moved by normative reasoning may adopt, and where the aim is to understand how the concept of poverty may fit into each of these positions. I begin with a discussion of the possibility of incorporating the alleviation of poverty as a distinct dimension in the conception of the good within utilitarianism - the most commonly endorsed teleological theory.

### 3. A Utilitarian Response

A familiar interpretation of the impartial perspective has been to explain it as the viewpoint of a detached observer.<sup>29</sup> The idea is that the demand for reasonableness in social choices ought to be connected to our ability to have sympathetic feelings towards our fellow beings, where the construction of the ideal actor as a *detached* observer aims to distinguish the ideal scheme of sympathetic feelings from the scheme of sympathetic feelings which we may express from the personal standpoint; the detached observer has no relationship to any of the members of society, and would thus presumably be granting everyone equal consideration.<sup>30</sup> The framework is frequently used to defend classical utilitarianism. The argument is that in order to

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<sup>28</sup> Smith writes: "Before we make any proper comparison of those opposite interests (his interests and my interests), we must change our positions. We must view them neither with our own eyes nor yet with his, but from the place and with the eyes of a third person who has no particular connection with either, and who judges with impartiality between us" (*Theory of the Moral Sentiments III 3.3.*, see Wiggins (1987), p. 74).

<sup>29</sup> See Rawls (1971), p. 183-193, for a critical view on this interpretation of the impartial perspective.

<sup>30</sup> The relevance of sympathy in moral reasoning can be traced back to David Hume and Adam Smith. Hume once remarked that: "No quality of human nature is more remarkable...than the property we have to sympathise with others, and to receive by communications their inclinations and sentiments" (see Binmore (1994), p. 54-56).

have equal sympathy for each of the individuals involved, the detached observer should imagine himself in the place of each person in turn, and, when he has done this for everyone, the strength of the detached observer's approval ought to be determined by the balance of each person's good to which he has sympathetically responded. Conventionally, it has been argued that from this kind of reasoning it follows that the detached observer will acknowledge the total net amount of goodness as the relevant criterion to be used in the ranking of states of affairs, where a person's good has been defined either in terms of happiness or desire-fulfillment. This conclusion is appealing at first glance; the greatest amount of happiness seems to be what we pursue in our own lives and in the lives of those we love,<sup>31</sup> and, thus, it appears rather innocuous to claim that this also should be what we generally ought to pursue in social choices.

However, the classical utilitarian framework poses some well-known problems for our ordinary intuition. The greatest-amount-of-happiness criterion can provide normative support for the sacrifice of the happiness (or desire-fulfillment) of one person, without limit, for the total amount of happiness. Surely, classical utilitarianism supports, on resource allocation issues involving identical individuals, equality in happiness among people. This follows from the fact that in this particular situation the greatest amount of happiness is achieved by an equal distribution of resources - given the factual assumption that resources produce 'diminishing marginal benefit' to people (i.e. in this particular case an equal distribution of resources implies that the 'marginal benefit' from an extra unit of resources is the same for all members of society). But in general, the framework may support any distribution of happiness in society if people differ in their capacity to convert resources into happiness.<sup>32</sup> Moreover, if no restrictions are placed on the kind of sources of happiness which are to be counted as appropriate in social welfare judgements, then the classical utilitarian framework involves the claim that whether we for example should prefer a state of affairs where someone is tortured to a state of affairs where no one is tortured ought

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<sup>31</sup> But see Tungodden (1994a) for a comprehensive discussion of the content and structure of our personal aims.

<sup>32</sup> Initially, this argument was discussed by Friedman (1947), who, in a controversy with Lerner, asked: "Suppose, further, that it is discovered...that a hundred persons in the United States are enormously more efficient pleasure machines than any others, so that each of these would have to be given an income ten thousand times as large as the income of the next most efficient pleasure machine in order to maximise aggregate utility. Would Lerner be willing to accept the resulting division of income as optimum...?" (p. 310-311). See also the writings of Sen (1973, 1979, 1992).

to solely depend upon which state of affairs has the greatest amount of happiness or desire-fulfillment.<sup>33</sup> The gains of some persons ought to be balanced against the loss of other people in the ranking of states of affairs, and, hence, any loss of one person (of whatever size and type) may be outweighed by a gain of other people. In addition, the fact that some people acquire their happiness from for example torturing an innocent child is irrelevant in the original version of classical utilitarianism (where there is no 'laundering' of the sources of happiness).<sup>34</sup>

Hence, it may appear futile to aim at intrinsic normative support for the concept of poverty within this framework. But this conclusion may rest on some particular assumptions underlying the traditional interpretation of the structure of the good within classical utilitarianism, and some further deepening on this issue will turn out to be of interest for our purpose. What I am aiming at can be illustrated by briefly discussing the kind of reasoning presented by Bentham - the originator of classical utilitarianism. Bentham argued - as a rational intuitionist - that pain and pleasure were the body of goodness and rightness, and, moreover, that the total amount of these experiences present should be the only relevant aspect in deciding the goodness (or badness) of states of affairs.<sup>35</sup> Suppose that one as a detached observer agrees with Bentham on this issue, and assume as well that we are able to precisely define and measure the amount of pain on the same scale, and opposite of, the amount of pleasure. Would this necessarily imply that a perfectly sympathetic detached observer should choose in accordance with the classical utilitarian principle in order to grant everyone equal consideration?

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<sup>33</sup> There have been advanced various suggestions as to how one could avoid this problem within a utilitarian framework, by introducing rule utilitarianism and indirect utilitarianism, but none of them have proved to be a very good answer to the basic problems of utilitarianism. See Kymlicka (1990) for a brief survey on this issue.

<sup>34</sup> In addition, we may question whether utilitarianism is too demanding as a normative theory, because it requires us to maximise the total amount of happiness in every choice we make; i.e. it interprets every choice of a person as a social choice. However, this is a complex issue which it is beyond the scope of this essay to discuss. See, for example, Parfit (1984) for a discussion of motive utilitarianism, and the possibilities for taking into account partiality within a utilitarian normative framework. See also Nagel (1979), p. 116.

<sup>35</sup> See chap. 2 in *An Introduction to the Principles of Morals and Legislation* by Jeremy Bentham for his defence of classical utilitarianism (reprinted in Ryan (1987)). Notice that John Stuart Mill - frequently viewed as a prominent defender of this framework - was less convinced about the general principle of classical utilitarianism (see Ryan (1987), p. 50-51).

The suggestion of Bentham (to wit to assign equal weight in social choices to the amount of pain and the amount of pleasure present in states of affairs) is far from self-evident. And the principle of negative utilitarianism has been advanced by various authors, saying that the avoidance of pain ought to have lexicographic priority in social choices.<sup>36</sup> The intuition behind this line of reasoning is simply that "the happiness of a million somehow fails utterly to compensate or even to mitigate the torture of one".<sup>37</sup> A view of this type - acknowledging a certain asymmetry between pleasure and pain - may also find support within the framework of rational constructivism, where it may be argued that it is plausible to assume that the detached observer would express more sympathy to the avoidance of pain than to the experience of pleasure.<sup>38</sup>

Versions of negative utilitarianism may indicate interesting normative interpretations of the idea of poverty, but before we make any further investigations along these lines, we have to clarify some weaknesses in Bentham's utilitarianism. The claim made by Bentham is problematic in the sense that pain and pleasure are not two distinct kinds of experiences, there is no common quality that can define neither the experience of pleasure nor the experience of pain.<sup>39</sup> This is widely recognised, and a common response has been to argue that the utilitarian framework should be interpreted in the context of desires (or preferences).<sup>40</sup> The attack on Bentham's view on pleasure and pain is justifiable, and the change in focus towards fulfilment of desires (or preferences) does not necessarily undermine the argument present in negative utilitarianism. On the face of it, however, the move from pain and pleasure to experiences more or less desired seems to erode some of the intuitive appeal of arguments of this type. The reference to pleasures and pains marks a clear distinction between goodness and badness, and, thus, makes the principle of negative utilitarianism transparent. It is less evident, though, how this distinction should be interpreted within the framework of desire-utilitarianism.

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<sup>36</sup> For such a view, see Popper (1966). A more eccentric view along these lines was advanced by Epicurus, who argued that the state of painlessness is equivalent to the highest possible pleasure, so that if absolute freedom from pain is obtained, the aim of classical utilitarianism is achieved (for a discussion of the ideas of Epicurus, see Sidgwick (1907).

<sup>37</sup> Perry (1950), p. 671.

<sup>38</sup> On this issue, see also Smart and Williams (1973) and Griffin (1979, 1986).

<sup>39</sup> See, for example, Parfit (1984), p. 493, and Griffin (1986), p. 7-8.

<sup>40</sup> See Parfit (1984), appendix I.

The possibility for a distinction between badness and goodness within a desire-fulfilment interpretation of utilitarianism depends on how the relation between a desire (or a preference) and the good is interpreted. Negative utilitarianism is hard to understand within this framework if it is the fulfilment of desires in itself that is the sole aspect of good. But is it desires that make something valuable, or do we have a desire for something because it is valuable? It is possible, I would like to claim, to interpret desire-fulfilment utilitarianism as a normative theory that is based on the view that there are various reasonable conceptions of the good, and not necessarily as a normative theory that suggests that the fulfilment of desires in itself is the single aspect of good that we ought to pursue. This is an interpretation which is in line with most of utilitarian reasoning. Normative theories that in one way or another endorse the desire-fulfilment utilitarian view argue in favour of a certain degree of idealisation (or correction) of desires, i.e. some desires are rejected as irrational (as for example sadism, envy, and malice), and that would not be a rational procedure to adopt within a normative framework that endorsed desire-fulfilment in itself as the sole aspect of good.<sup>41</sup>

As reasonable constructivists, a more comprehensive view on the idealisation of preferences would be to make the (not too implausible) assumption that from practical reasoning, a consensus about what constitutes the set of good and bad experiences can be attained in society (and rational intuitionists - as Sidgwick and Mill - would probably support a distinction of this kind).<sup>42</sup> If we accept this premise of desire-fulfilment utilitarianism, it seems also indisputable to infer that everyone has a desire for experiencing all the good situations and avoiding all the bad situations which constitute the set of experiences which there is consensus about.<sup>43</sup> Admittedly, I find these assumptions particularly plausible with respect to the badness dimension. There is undoubtedly consensus about the badness of some circumstances, and everyone attempts - to greater or less extent - to avoid the experience of situations of this type. What I have in mind is, for example, the experience of being

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<sup>41</sup> See Sen and Williams (1982), p. 9-11, for a brief discussion of some problems connected to the idealisation of desires. See also the contributions of Hare (1982), Harsanyi (1982), Mirrlees (1982), and Shick (1982) in Sen and Williams (1982). Harsanyi (1982) claims that "[a]ny sensible ethical theory must make a distinction between rational wants and irrational wants, or between rational preferences and irrational preferences" (p. 55).

<sup>42</sup> See Taylor (1993) for a discussion of the structure of practical reasoning.

<sup>43</sup> By making this assumption we have avoided the difficulty of 'discontinuity' discussed in Sen and Williams (1982), p. 6. But how can we avoid making such a conclusion? If people agree that a certain experience is good, then why should they not desire this experience?



undernourished and the experience of being tortured, where it is hard to believe that anyone would reject the characterisation of these experiences as bad.

So far so good. But how should we interpret the fact that people's preference structures are different? The story may be the following: The problem each of us faces is that the number of good situations that may be pursued within a life span is limited, so that some selection must be made from the full range of good situations that might be realised. Similarly, we are unable to live a life without experiencing bad situations, and, thus, we have to reflect upon which bad situations we ought to strive most to avoid. A person's preference structure reflects his or her response to this unavoidable choice of framework for value-seeking activity, which - for various reasons - may differ from other people's ranking (but not, we now assume, in the definition) of good and bad experiences. Hence, I assume that even if we reject the narrow definition of good and bad in the context of pain and pleasure, we retain the idea that there is a realm of good and bad experiences which explain why people have a desire for experiencing some situations and a desire for avoiding other situations.<sup>44</sup> Thus, the principle of negative utilitarianism may be reformulated within this type of desire-fulfillment utilitarianism, saying that in social choices we ought to assign priority to the avoidance of those situations which we all acknowledge are bad.

Traditionally, it follows from people's preference structure that the intensity of their desires to experience and avoid situations varies, and, thus, we have to clarify the role of the intensity of a desire in the framework outlined above. One possible view - which I shall pursue - is to argue that the amount of goodness or badness extracted in any situation will be determined by the intensity of the person's desire for experiencing or avoiding that particular situation. Hence, the most goodness is attained by satisfying the most intense desires for good situations, and the most badness is avoided by avoiding the bad situations people have the most intense desires for avoiding. This is a controversial assumption, and we may question whether the intensity of desires possibly can play such an important role in the context of goodness and badness. Our desires are (at least) partly shaped by society and the possibilities we face, and some people may find it unreasonable that the question of goodness and badness is to be settled on such a flimsy basis.

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<sup>44</sup> See Tungodden (1994a) for a more extensive discussion of this issue.

Two other options seem available: We may claim that the question of goodness and badness is independent of the intensity of desires, or, more moderately, that it is only partly dependent on the intensity of desires. The claim of independence, though, is implausible. If a person - for whatever reason - only has a weak desire for experiencing a particular good situation, then it is difficult to understand how there can be achieved much goodness by fulfilling that desire (if the fulfilment, that is to say, does not change the preference structure of this person). Someone may, of course, claim that the lack of intensity in this desire is irrational, and argue that the person has too weak a desire for a situation which has an enormous goodness potential (which is to presuppose that the goodness and badness potential differ in various situations). But that is not an argument which undermines the main claim in this paragraph, to wit that the lack of intensity in a desire implies the lack of goodness in having this desire fulfilled.

The more moderate claim, however, saying that the intensity of desires only partly determines the amount of goodness or badness present in the fulfilment of these desires, appears somewhat more plausible. That is in fact a view which is already involved in the framework outlined above (by the acceptance of corrections of particular desires), and, thus, the question concerns whether we should extend the idealisation of preferences to also include the ranking of various good and bad situations. The problem with such a framework is that its first principle consistently will be in conflict with the Pareto principle, by evaluating the change in the life of a person differently from the person's own evaluation. Obviously, this is a conclusion that one should be reluctant to accept in normative reasoning.<sup>45</sup> Hence, the assumption that most goodness is attained by satisfying the most intense desires for good situations (and that most badness is avoided by avoiding the bad situations people have the most intense desires for avoiding) outlines a reasonable setting to work within in order to interpret utilitarianism.

The issue of interest in our context is how to balance the total amount of goodness against the total amount of badness in social choices. However, implicit in choosing

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<sup>45</sup> There are particular situations where the Pareto principle ought to be overruled in normative reasoning (as is already indicated by the acceptance of some idealisation of preferences), but I find it unreasonable to endorse a normative framework which involves a comprehensive conflict between the first principles and the Pareto principle. See Sen (1970a) and Broome (1991) for a discussion of some of the problems with the Pareto principle.

the intensity of a desire as the metric for the amount of goodness or badness extracted in a situation is precisely the statement that we have to assign equal weight to the amount of goodness and the amount of badness present in states of affairs (at least in order to avoid a conflict with the Pareto principle). If a person's desire for avoiding a bad situation is as intense as his or her desire for experiencing a good situation - which implies that the amount of goodness extracted from experiencing the good situation is equal to the amount of badness present in the bad situation - then the person is indifferent between avoiding the bad situation (and not experiencing the good situation) and experiencing the good situation (and not avoiding the bad situation). Thus, within this framework, negative utilitarianism and similar arguments are in conflict with people's own judgement of states of affairs.

However, one possibility remains in order to defend - within our setting - the line of reasoning reflected in the principle of negative utilitarianism: We may claim that people in fact assign lexicographic priority to the avoidance of certain bad situations, which would signify that the amount of badness extracted by experiencing these bad circumstances exceeds the amount of goodness it is possible for people to extract from experiencing any amount of good circumstances. In fact, this appears to be an a priori assumption in much of modern poverty literature, where, by way of illustration, a lot of work has concentrated on proving that the expenditure-elasticity of calorie intake in populations with undernourishment are close to unity.<sup>46</sup> This hypothesis may be interpreted as reflecting the view that the badness avoided by becoming somewhat less undernourished exceeds the goodness it is possible to extract from experiencing any good situations and the badness it is possible to extract from any other bad situation (that is to say, that can be experienced or avoided by the use of resources).

The empirical results do not support the hypothesis, and Townsend, among others, has argued that in order to understand the fact that "[i]n observation of behaviour in every society, the drive to satisfy hunger sometimes take second place to other drives..."<sup>47</sup>, one has to recognise that the badness of having unfulfilled social needs may sometimes exceed the badness experienced by being undernourished. That may be a reasonable claim, but it appears to me that the most plausible interpretation of the

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<sup>46</sup> For an overview on the empirical literature on this topic, see Lipton and Ravallion (1993), p. 36-38.

<sup>47</sup> Townsend (1985), p. 664. See also Townsend (1962,1979).

empirical results nevertheless would be to accept that *rational* undernourished people in fact use some of their resources to pursue *goodness* in their lives - that may be, for example, on taste, appearance or odour.<sup>48</sup> A somewhat more compelling case for lexicographic priority in people's desires may be made by focusing on people's behaviour in extreme situations (such as famines). However, even this argument would probably not provide sufficient support for the principle of negative utilitarianism, because it is not too controversial to assume that people are willing to gamble, in the choice between risky projects, on these (extremely) bad situations if the expected gain is large. Thus, negative utilitarianism will probably also in cases of this kind be in conflict with people's own judgement of the situation.

It should be kept in mind, though, that the lack of priority to the presence of badness within the desire-fulfilment utilitarian framework does not necessarily imply a lack of priority to the fulfilment of a desire for avoiding (for example) undernourishment, because this desire is (in most cases) undoubtedly more intense than other desires. Hence, one way of understanding a poverty line within this framework is that it identifies people who experience an extreme amount of badness, and who have a life where too many good situations are absent. The normative importance of this type of poverty is derived from the intensity of their desires for avoiding these bad situations and experiencing the good situations. Thus, the poverty line can hardly be interpreted as a norm of completeness, but rather as a criterion for selecting out a group of people with particularly intense desires. And the extent of this kind of poverty may play a *pro tanto* role in social choices for people who endorse the utilitarian framework; it gives a *prima facie* reason for saying something about the goodness (or badness) of a state of affairs, but contrary reason may be produced by reference to the presence of other bad or good experiences.<sup>49</sup>

The point of departure of classical utilitarianism is the view that the overall amount of happiness or desire-fulfilment (in the rest of the essay I ignore the distinction to save words) is the only relevant issue in normative reasoning. Therefore, it does not matter

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<sup>48</sup> On this issue, see also Dasgupta (1993), p. 470. Surely, the distinction between badness and goodness in this discussion is somewhat elusive; some readers may, for example, want to claim that it is goodness (and not avoidance of badness) people pursue when they strive for fulfilment of social needs. But be that as it may, the important issue in this context is the absence of lexicographic priority in their desires, and, thus, I do not aim at more precise definition of the distinction between goodness and badness.

<sup>49</sup> See Sen (1967,1973) for a discussion of non-compulsive value judgements.

in what life happiness comes about, because it is happiness in itself that has inherent normative status. A rational constructivist may endorse this position if she finds convincing the impartial view reflected by the choice of the detached observer outlined above. But some rational constructivists reject this position, because they find it implausible that a detached observer should be invariant to how much happiness there is present within the life of each member of society when he makes his choice. I now turn to a discussion of a framework that provides a response to this type of criticism about the choice of the ideal actor.<sup>50</sup>

#### 4. A Deontological Response

Deontological reasoning underlines the duty we have to fulfil various obligations, and claims that the rightness or wrongness of states of affairs depends on whether or not these obligations are fulfilled.<sup>51</sup> There are, of course, divergent views about what should be a reasonable scheme of moral obligations, but the point of departure of most of contemporary deontological intuitionism has been (or may at least be interpreted in the context of) the Kantian principle that you shall "[a]ct in such a way that you always treat humanity, whether in your own person or in the person of any other, never simply as means, but always at the same time as an end".<sup>52</sup> From this idea it follows that it is wrong to prefer a state of affairs where someone is treated merely as means to a state of affairs where everyone is treated as an end. The important deviation from teleological reasoning derives from the fact that the Kantian principle specifies a duty towards each of the members of society and not the content of some impersonal good or bad which ought to be maximised or minimised. Hence, the Kantian principle does not allow us to treat someone merely as means even if that would imply that one thereby avoided the same treatment of another group of people.

Thus, it is a misunderstanding when (among others) Binmore claims that within a deontological framework one does not take into account the consequences of an act in

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<sup>50</sup> Notice that the classical utilitarian principle is strengthened if we adopt a particular metaphysical position - to wit the reductionist view - advanced by Parfit (1984). Parfit argues that our view on personal identity is wrong. We are, roughly speaking, less connected to our own past and to our own future than we believe, and, therefore, we ought to be less concerned with the separateness of lives in social choices. See also Broome (1991) on this issue.

<sup>51</sup> Deontology derives from the Greek *deon*; 'duty'.

<sup>52</sup> Kant (1964), p. 96.

an evaluation of the rightness or wrongness of a state of affairs.<sup>53</sup> If that were the case, then this normative framework would not be worth our attention. The content of the Kantian principle, however, is precisely about the consequences of our acts, to wit that we ought to avoid to act in a way that has as a result that some people are treated merely as means. A more problematic issue, though, is how to understand more precisely Kantian intuitionism, and deontological doctrines of very different types have claimed support from the version of the categorical imperative outlined above.<sup>54</sup> I now turn to a discussion of this issue, and, moreover, to how one may defend these various interpretations within the framework of reasonable constructivism and connect them to the concept of poverty.

First, we may ask whether the classical utilitarian view can be defended within the Kantian framework as well.<sup>55</sup> Is it possible to argue that the choice of the detached observer outlined in the preceding section conveys a plausible interpretation of the categorical imperative? It is, and the line of reasoning may be as follows: The detached observer gives everyone equal treatment by giving each person's interests equal weight in every situation, and - a deontological utilitarian may argue - that is what each person deserves as an end; to ignore someone's interests in any situation would be to ignore that person's status as something of intrinsic importance.<sup>56</sup> The same argument may as well be constructed from a somewhat different position, proposed by Harsanyi, who, in what is often named the equiprobability model, claimed that a reasonable interpretation of the impartial standpoint is the situation where the ideal actor "had an equal chance of obtaining any of the social positions existing in this situation, from the highest to the lowest".<sup>57</sup> Hence, the ideal actor is no

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<sup>53</sup> See Binmore (1994), p. 110. As pointed out in Rawls (1972): "It should be noted that deontological theories are defined as non-teleological ones, not as views that characterise the rightness of institutions and acts independently from their consequences." (p. 30).

<sup>54</sup> There are several versions of the categorical imperative, the one referred to in the text is the so-called 'Formula of the End in Itself'. The strictest version is 'The Formula of Universal Law', to wit that one ought to 'act only on the maxim through which you can at the same time will that it be a universal law'. See O'Neill (1991) for a survey of Kantian ethics.

<sup>55</sup> On this issue, see Kymlicka (1988).

<sup>56</sup> A reasonable deontological utilitarian view would also have to accept some idealisation of preferences; on this issue, see the discussion in the preceding section.

<sup>57</sup> Harsanyi (1955), p. 316. See also Harsanyi (1976, 1982). Here, I ignore Harsanyi's use of von Neumann-Morgenstern preferences in interpersonal comparisons between people (which is of some importance in the line of reasoning of Harsanyi), and focus solely on the fundamental idea in Harsanyi's approach. Harsanyi has two models on this issue. The one discussed in the text was originally advanced in Harsanyi (1953); an alternative axiomatic version appeared in Harsanyi (1955).

longer a detached observer, but involved in the situation as one who in advance is unaware of his or her position. It follows from Bayesian rationality that such an (involved) ideal actor would prefer the state of affairs with the highest mean of happiness (which I in the following, for the sake of simplicity, assume is the relevant parameter), and which thus would give the same ranking as the classical utilitarian principle.<sup>58</sup> Hence, both models support a somewhat similar approach to the idea of poverty, though the underlying intuition differs. The poverty line may, within a deontological utilitarian framework, be interpreted as identifying a group of people who in their lives experience situations where they undoubtedly are treated merely as means, because their interests compared to other interests involved have not been given the consideration they deserve.

However, deontological utilitarianism is as vulnerable as teleological utilitarianism, because the framework does not attach any intrinsic importance to the extent of inequality in happiness in the lives of the members of society. An important challenge to the deontological utilitarian framework has been advanced by Rawls, who argues that our Kantian duty is to give each person's overall life prospects equal consideration (and not only people's interests in each particular situation). If we do that, Rawls claims, then we would recognise that there is no morally relevant reason that can justify that anyone should be given lower prospects of life for the sake of higher expectations of others.<sup>59</sup> Rawls elaborates the argument by placing the ideal actor (or the ideal contractor in a Rawlsian world) behind a veil of ignorance in an original position, where the ideal actor is to choose "once and for all the standards which are to govern ...[the] life prospects [of the members of society]."<sup>60</sup> By rejecting the use of probabilities in the original position,<sup>61</sup> Rawls claims that the ideal actor has to consider normative questions as if she was each of the members of society

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See Diamond (1967), Sen (1976, 1982), and Gauthier (1986) for a forceful criticism of this approach, and Broome (1991) for a subtle defence.

<sup>58</sup> See Tungodden (1994a) for an elaboration on the concept of well-being. Notice as well that the equiprobability model cannot be used as a defence of classical utilitarianism as a teleological theory (as we discussed in the preceding section), which becomes evident in social choices that influence the size of the population. A teleological utilitarian theory always ranks states of affairs with respect to the total amount of happiness, but that is not the case with the equiprobability model of Harsanyi when population size varies. See Parfit (1984) on this issue.

<sup>59</sup> "No one deserves his greater natural capacity nor merits a more favourable starting place in society", see Rawls (1971), p. 180.

<sup>60</sup> Rawls (1971), p. 176.

<sup>61</sup> For a critical view on the objection to the use of probabilities in the original position, see Harsanyi (1976), p. 46-48.

separately - as if each of their lives was her *only* life.<sup>62</sup> Undoubtedly, this is a tall order, but it may also be an important part of the framework needed in order to answer the question at issue. The choices of the ideal actor should reflect a normative position that we ought to take into account in our lives in order to be able to justify our actions to others on grounds they cannot reasonably reject. Hence, the choice of the ideal actor needs to be founded on an understanding of what would be a fair claim from each of the individuals involved. And how can the ideal actor have any idea about that without trying to imagine how it is to live each of the lives in question as his or her only life?

How would the ideal actor choose behind a veil of ignorance? A very moderate suggestion would be to say that in this position, the ideal actor should find it unreasonable to prefer states of affairs where the life prospects of some people are bad to states of affairs where everyone's life prospect is good. The ideal actor would have to imagine how it is to live the life of those who are badly off as his or her only life, and would, therefore, reject such an alternative without considering the mean life prospect in this state of affairs. This marks a fundamental distinction between the framework of Harsanyi and Rawlsian reasoning. More specifically, Rawls argues that the ideal actor would rank states of affairs according to two principles of justice. The first principle - which is assigned priority over the second - states, roughly, that each person has "an equal claim to a fully adequate scheme of equal basic rights and liberties".<sup>63</sup> The second principle claims that social and economic inequalities are to be arranged so that they are to the greatest benefit of the least advantaged members of society.<sup>64</sup> This principle has been slightly modified by Sen, who introduces the

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<sup>62</sup> See also Nagel (1991). In this discussion I ignore the question about the appropriate thickness of the veil of ignorance. I probably also extend the use of the arguments of Rawls to issues where Rawls would find his reasoning unfit. I indicate this by using the term Rawlsian reasoning in order to recognise the source of the argument, but thereby also underlining the fact that it is not obvious that Rawls himself would adopt this argument.

<sup>63</sup> Rawls (1993), p. 5. These liberties are given by a list which includes "freedom of thought and liberty of conscience; the political liberties and freedom of association, as well as the freedoms specified by the liberty and integrity of the person; and finally, the rights and liberties covered by the rule of law" (Rawls (1993), p. 271). Rawls acknowledges that this is nothing but a list, and that there may be another list which would do a better job even within this framework. Notice, moreover, that Rawls has changed the formulation of the first principle of justice; Rawls (1971) argued that strict priority should be assigned to "the most extensive total system of basic liberties" (p. 60). See Rawls (1993), Lecture VIII for a discussion of this issue.

<sup>64</sup> See Rawls (1971), p. 83, and Rawls (1993), p. 6. See also my discussion of the second principle of justice in Tungodden (1994b).



leximin principle.<sup>65</sup> We may interpret the leximin principle as saying that in the choice between two alternatives where the worst-off group is indifferent, then we should choose the alternative that is to the greatest benefit of the second worst-off group (and so on).

First, it is not obvious, as Rawls himself acknowledges as well,<sup>66</sup> that we should assign strict priority to the avoidance of violations of basic liberties to socio-economic issues. By way of illustration, undernourished people may very well accept a trade-off between essential liberties and socio-economic rights, and to presuppose anything else may involve an unwanted conflict with the Pareto principle (of the same kind as we discussed in the context of negative utilitarianism). I return to this issue shortly, but before I do that I would like to elaborate somewhat on the structure of these principles. The first principle involves a great deal of incompleteness in the normative ordering of states of affairs. The principle can be interpreted as saying that people are treated merely as means if they have one (or several) of these liberties violated, and, therefore, states of affairs where that is the case should not be chosen if there are feasible states of affairs where all these liberties are respected. But this principle does not say anything about how to rank among various states of affairs where these basic liberties are violated; it does not claim that we ought to prefer a state of affairs with a few violations to a state of affairs with any number of violations. Some readers may find this issue trivial, and insist that one, of course, has to prefer fewer violations to more violations. However, in situations where those who are victims in the two states of affairs are different people, that is not obvious from Kantian reasoning. The Kantian principle does not in any situation permit us to treat someone as merely a mean. Therefore, it is not straightforward to extend the interpretation of the first principle to allow the sacrifice of some people's basic liberties in order to avoid that the basic liberties of a larger group are violated.

The second principle can be interpreted as saying that no one - even if they are badly off - is treated merely as mean in resource allocation questions if the leximin criterion

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<sup>65</sup> See Sen (1970). Sen interprets the second principle of justice as being solely concerned with the worst off person, and, hence, the leximin principle in the text is a modification of the suggestion of Sen. On this issue, see Tungodden (1994b).

<sup>66</sup> Rawls (1993), p. 7.

is applied.<sup>67</sup> The condition of the worst-off group in the chosen state of affairs is better than the condition of the worst-off group in any other feasible state of affairs, and, thus, one may maintain that this group cannot reasonably argue that their status as ends is violated.<sup>68</sup> Moreover, the rest of the population is better off than the worst-off group in the chosen state of affairs, and can therefore neither (according to the Rawlsian view) reasonably reject the chosen state of affairs on the basis of the Kantian principle. Thus, in the Rawlsian framework, the ideal actor is to arrange social and economic inequalities as if he or she were going to be in the least advantaged group in each state of affairs; any other ranking would, according to this view, do wrong to the worst-off group. Hence, there is less incompleteness in the ranking between states of affairs differing on issues covered by the second principle of Rawls - though some incompleteness persists because the second principle does not state a position on how to distribute resources within the least advantaged segment.

The lexical order between these two principles is, as already mentioned, questionable; a state of affairs where some people are undernourished (but where no essential liberties are violated) may be considered as worse than a state of affairs where essential liberties are violated (but no one is undernourished). However, I am not going to elaborate on this trade-off, because it is probably a part of normative reasoning where we have to expect the presence of some incompleteness. The intention, though, is not to suppress the inherent normative importance of the aspects covered by the first principle. On the contrary, the first principle is essential because it underlines the importance of incorporating the violation of basic political and civil liberties in a discussion of Kantian poverty. This concern becomes even more pressing when we take into account the empirical fact that societies are not faced - as frequently alleged - with a choice between political and civil liberties and economic

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<sup>67</sup> Here I ignore any comprehensive discussion about how to measure well-being. See Sen (1992), p. 79-87 for a critical view on the Rawlsian framework of primary goods.

<sup>68</sup> We should notice that there is a problem with this interpretation of the second principle of justice. The worst-off group in the chosen state of affairs may be in a better situation in other feasible states of affairs (but, of course, in any other feasible state of affairs someone else would be worse-off than the worst-off in the chosen state of affairs). Thus, strictly speaking, the social arrangements are in these situations not necessarily to the benefit of the least advantage group (because they would not prefer this state of affairs). I do not pursue this issue any further, and the problem is avoided if the same group (for example the least talented) is the worst-off in every state of affairs; but see Parfit (1984), p. 490-493.

progress.<sup>69</sup> Hence, violations of political and civil liberties cannot be supported by arguing that they contribute to the improvement of, for example, life expectancy and infant survival rates (which could have been a possible way of defending these violations within a Kantian framework), and, thus, it is hard to interpret these violations as anything but a transgression of people's status as ends. Thus, to solely connect the idea of poverty to resource allocation issues - which frequently is the case in the poverty measurement literature - is to delineate too narrow a picture of the obligations we have towards other people. However, after having flagged this important issue, I confine the discussion in the rest of the essay to the conceptualisation of poverty with respect to resource allocation questions.

How may we, within the Rawlsian framework, understand poverty in the context of resource allocation questions? The leximin principle can be interpreted as saying that people are treated merely as means if they have less than what the worst-off group in society could have had in a feasible state of affairs. But we may question whether it is fair to argue that everyone ought to support a criterion which assigns the least advantaged group dictatorial power on every issue covered by the second principle of justice. I want to claim that neither is it obvious that Rawls' basic argument (viz. that native resources and social positions are morally arbitrary) implies that the leximin criterion is in compliance with the Kantian principle, nor is it trivial to say that the ideal actor would endorse the leximin criterion behind a veil of ignorance.

Consider first the link between talent and distribution. Some people are definitely more talented than others, and contribute, therefore, more to the production of various commodities. The question is, then, how these more talented people ought to face the fact that there are people with fewer native resources who contribute less, and who consequently would be entitled to fewer commodities in a society without redistribution. The more talented group (we assume) want to redistribute some of their commodities in order to be able to justify their way of living to the less talented group, but they may find the leximin criterion unreasonable. Why? Simply because they experience an unreasonably strong tension between aims and interests derived from the personal standpoint and the claims made by Rawls' framework. That,

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<sup>69</sup> See Dasgupta (1993), p. 116-121. Notice that there seems to be one interesting exception from this general conclusion; in countries that enjoy a per-capita national income less than \$ 1500, adult literacy rates are negatively and significantly correlated with political and civil liberties.

however, is a tension which is not present in the lives of the worse-off group, who are receivers of resources in the distributional arrangement. Hence, the better off group may argue that there ought to be a trade-off between the improvement of the conditions of the worst-off group (who in an affluent society not necessarily have to be badly off) and the amount of tension present in the lives of more talented people.

Thus, the better off group may agree that the members of the less talented group under some distributional arrangements are entitled to such a tiny amount of resources that their status as ends is threatened, and at the same time reject that the leximin criterion ought to be the yardstick for the definition of what is a member's reasonable share of the resources. The argument, though, is not based on a view which necessarily is in conflict with the essential Rawlsian intuition; talented people may acknowledge that they do not deserve their greater natural capacity, but at the same time find it unreasonable that institutional arrangements deal with the natural distribution entirely through the eyes of the least talented group. Furthermore, they may claim that the ideal actor also recognises this when he imagines how it is to live the life of a talented person as his only life (which is part of the imaginary process the ideal actor has to go through before making a choice behind a veil of ignorance). Hence, a modified version of the Rawlsian framework may identify people as poor if they have less than a reasonable share of the resources in society (where the leximin principle is the most demanding interpretation of the idea of a reasonable share of the resources in society).

Another problem with the second principle of justice has been debated by Harsanyi. Harsanyi has criticised the Rawlsian line of reasoning by introducing the following example: "[C]onsider a society consisting of one doctor and two patients, both of them critically ill with pneumonia. Their only chance to recover is to be treated by an antibiotic, but the amount available suffices only to treat one of the two patients. Of these two patients, individual A is a basically healthy person, apart from his present attack of pneumonia. On the other hand, individual B is a terminal cancer victim but, even so, the antibiotic could prolong his life by several months. Which patient should be given the antibiotic?"<sup>70</sup> The example is about an important social choice, namely how to organise health policy. Thus, it is of importance that an appropriate normative

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<sup>70</sup> Harsanyi (1976), p. 41.

framework is able to guide us in a plausible way on this issue, and Harsanyi claims that that is not the case for the leximin criterion.

We have to make a few assumptions in order to make the reasoning underlying the conclusion of Harsanyi transparent. First, assume that A and B have had exactly the same level of happiness ( $H^A$ ,  $H^B$ ) before they became ill, and assume that B is attacked by cancer in the same moment as they both also are attacked by pneumonia (at time 0). The treatment takes place at time 1, and we may either choose policy  $T^A$  (i.e. we treat A) or  $T^B$  (i.e. we treat B). The person who is not treated dies at time 1, if A is treated he dies at time 3, and if B is treated she dies at time 2. The leximin criterion asks who is worst-off in each of the two relevant cases, and Harsanyi claims that that would be B in both situations.<sup>71</sup> The line of reasoning of Harsanyi is (roughly) sketched in Figure 1. If we choose policy  $T^A$ , then the total amount of happiness enjoyed by A and B from time 0 to their death is respectively  $H_{T^A}^A = (a + b + c + d)$  and  $H_{T^A}^B = a$ . Corresponding figures for policy  $T^B$  are  $H_{T^B}^A = (a + b)$  and  $H_{T^B}^B = (a + d)$ . Hence, B is the worst-off person in both situations as long as  $b > d$ .<sup>72</sup> Consequently, the leximin criterion claims that we should have a policy that in these situations instructs the doctor to give the antibiotic to B (where the cancer victim, after all, has his life prolonged). This is a counter-intuitive conclusion according to Harsanyi, and he claims that the example indicates that Rawls' second principle is fundamentally wrong.<sup>73</sup>

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<sup>71</sup> A and B may, of course, be interpreted as groups, i.e. A is the better off group and B the worse off group. A reasonable objection to the example may be to say that both A and B belong to the worse-off group; after all they are both critically ill. If that were the case, then the second principle of Rawls does not tell us anything about the distribution of resources in this example, because the second principle of justice does not state a position on how to distribute resources within the worse-off group (on this issue, see also Tungodden (1994b)).

<sup>72</sup> This restriction is only necessary in order to ensure that the same person is worst-off in both cases, but that is (as discussed earlier) not an assumption present in the second principle of justice. The conclusion in the example is, therefore, valid as long as  $d, b > 0$ .

<sup>73</sup> Harsanyi (1976), p. 44. However, it should be obvious that similar controversial examples can be produced in the context of utilitarianism (though Harsanyi overlooks this fact). If, for example, the cancer victim B would live as long as the healthy person A (who could be an old man), the utilitarian framework would still say that we ought to give the antibiotic to person A. I guess many people would say that that is not obvious, and that we probably should toss a coin in cases of this kind.

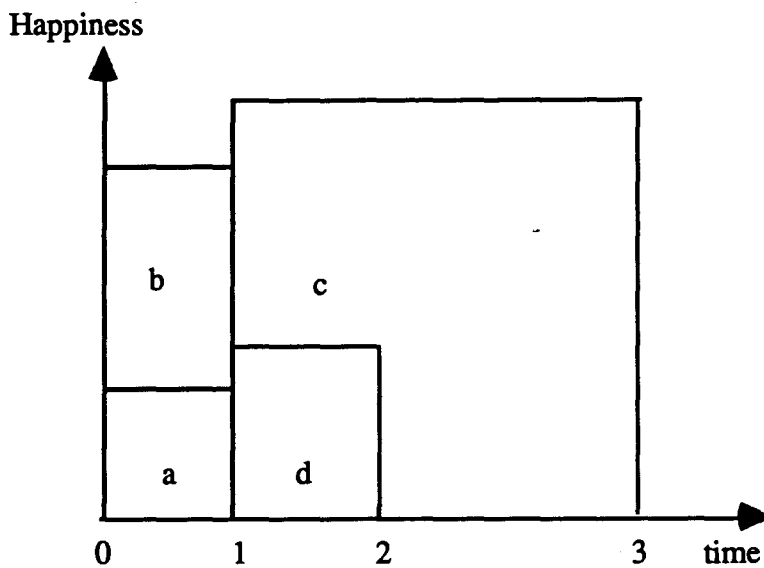


Fig. 1. An illustration of Harsanyi's example.

The problem in this situation is that the classification of the worst-off member is based on the total amount of happiness enjoyed throughout his life, and not on the total amount of happiness enjoyed from the point in time where the policy is implemented. If the latter view was adopted, then the leximin criterion would support the opposite health policy (because the corresponding figures would now be:  $[H_{T^A}^{*A} = (c + d), H_{T^A}^{*B} = 0]$  and  $[H_{T^B}^{*A} = 0, H_{T^B}^{*B} = d]$ ). But bygones are not bygones in the Rawlsian framework, and, thus, the fact that the cancer victim has enjoyed less happiness from time 0 to time 1 overrules the fact that the gain achieved by giving the antibiotic to A is far greater than the gain achieved by giving it to B.

Similar counter-intuitive examples may also be constructed with respect to the expected happiness enjoyed by people in the future (independent of the health policy), but it is not necessary to discuss this particular problem any further here. It is difficult to make an appropriate link between the future, the past, and the present in the stipulation of the overall level of well-being of people, and that makes the second principle of justice vulnerable to the type of criticism advanced by Harsanyi. The

principle has - for the same reason - some rather controversial consequences in a non-ideal world (which, in this context, has to be interpreted as a world where Rawlsian reasoning is at least partly neglected). If the principle is to be applied in our world, then it demands of us (literally interpreted) not only to alleviate existing inequalities, but also to compensate for the lower level of happiness that many people have enjoyed in their lives so far.<sup>74</sup>

The Rawlsian position, namely to define the overall life prospect of a person as the relevant parameter in a discussion of these issues, undoubtedly has some force, and it is far from obvious that we ought to consider by-gones as by-gones in normative reasoning. But still I find it plausible that people's present situation is stressed in social choices (which, I hasten to add, is a vague suggestion). A person's present situation dominates in our thinking on whether this person is treated merely as a mean or not, and it would be hard to argue that for example someone who is badly off in an affluent society is not treated as merely a mean because this person in the past has experienced a lot of happiness.<sup>75</sup>

Summing up: In my view, a sensible modification of the claim of Rawls is to argue that people are treated merely as means if they have less than a reasonable share of the resources in society. The appropriate length of the period of time over which the second principle of justice ought to operate, though, is an issue that needs to be discussed in the context of our perception of the link between fairness, personal autonomy, and identity.<sup>76</sup> However, it is beyond the scope of this essay to elaborate on this question, but I shall take up some other aspects connected to this interpretation of the second principle of justice in section 6 of the essay.

I should like to end this section by briefly commenting on the libertarian interpretation of the Kantian principle, which is rather different from the one present in the Rawlsian framework. The libertarian view is that any intentional interference in people's lives, without their consent, is to treat people merely as means, and, hence, is

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<sup>74</sup> This issue raises difficult questions about the link between an ideal and a non-ideal normative theory; see Rawls (1993), p. 285.

<sup>75</sup> Of course, there are many important questions which are closely connected to this issue, e.g. how the person became badly off. I ignore these issues here, though they need to be dealt with in a more elaborated discussion of how to understand the idea of a reasonable share of the resources in a non-ideal world.

<sup>76</sup> See also Nagel (1979), p. 124-125.

a violation of the Kantian principle. Consequently, any moral balancing act that is forced upon us is wrong.<sup>77</sup> This reading of the Kantian idea is compelling, because it is hard to think of a contrary interpretation of intentional interference in people's lives that aim at a benefit for someone else. We have separate lives and each of us has only one life, and, thus, in some sense it may appear inevitable to conclude that it would be wrong if anyone ever should be 'sacrificed' for others.

I cannot examine the conflict between the libertarian and the Rawlsian view closely here, but I want to sketch a way of understanding the Rawlsian argument with reference to the libertarian point of view. Rawlsian reasoning accepts interference in people's lives, and, thus, it is difficult to avoid the formal criticism of liberalism saying that by interfering in people's lives (aiming at a benefit for someone else) we are treating those 'sacrificed' simply as means and not as ends.<sup>78</sup> However, this type of criticism is probably not substantial if we keep in mind that the aim of interference within the Rawlsian framework is simply to guarantee that everyone is treated as an end, where it is assumed that this moral obligation is not necessarily fulfilled within a purely libertarian system. Hence, it follows that the use of people merely as means in certain respects is only allowed within a Rawlsian framework if it does not threaten their overall status as ends. Thus, to sustain a strong criticism against moral balancing acts, a libertarian has to argue that everyone's status as an end always is guaranteed within a purely libertarian deontological framework (which is what is contested by the Rawlsian argument).

Can a libertarian, then, support a Rawlsian definition of poverty? Yes, but not the more comprehensive implications of Rawls' theory with respect to the design of basic institutions. Libertarianism can be interpreted as a theory about what behaviour legitimately should be enforced. The claim made by every libertarian is that the only normative obligation that can be incorporated into the institutional structure in society is the obligation not to interfere in other people's lives without their consent. A libertarian may, of course, also claim that the absence of enforced interference in other people's lives is the only relevant criterion needed in order to justify our acts. But another possible libertarian response would be to say that each of us ought to

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<sup>77</sup> See Nozick (1974), p. 33.

<sup>78</sup> This is also recognised by Rawls (1971), who responds by asking "How can we always treat everyone as an end and never as a means only?" (p. 179).



contribute to the alleviation of Rawlsian poverty. The libertarian, however, does not accept enforced interference in order to achieve this aim, and that is where the basic difference between the Rawlsian and the libertarian framework is rooted on this issue.<sup>79</sup>

## 5. Teleological reasoning and deontological constraints

Kantian reasoning does not allow us to treat someone as a mean in order to avoid that other people are treated as means, and thus it rejects the ranking between states of affairs where this kind of poverty is present. That is a conclusion which most people probably find hard to accept, even though we at the outset of the essay indicated that some incompleteness was to be expected in a normative ordering of states of affairs. One way out of the problem may be to endorse a goal rights system suggested by Sen, where the violation of a person's status as an end is incorporated in a teleological framework.<sup>80</sup> Thus, the goodness (or badness) of a state of affairs in a goal rights system may depend on, among other things, the number and types of violations of the Kantian principle. Sen argues that this way of approaching the problem of deontological constraints in the evaluation of states of affairs is dominant in our thinking on these issues; it is for example frequently claimed that "the period of Emergency Rule in India was a bad one because so many rights of so many people were violated".<sup>81</sup>

Is it possible to defend this approach within a Kantian framework, or does a goal rights system throw the baby out with the bathwater? Is not a goal rights system simply eroding the protection of people's status as ends by allowing the trade-off between the improvement of the conditions of those who have less than a reasonable share of the resources in society (or who have some of their essential liberties violated) and other goals we may have? The answer may depend on how the goal rights system of Sen is interpreted, and in order to state a position on this issue we ought to consider the suggestions made by Sen on evaluator relativity and the possibility of a positional interpretation of the goodness of states of affairs.<sup>82</sup> Sen argues that an alternative internal structure of normative reasoning may be to allow

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<sup>79</sup> See also Nozick (1981), p. 502-504.

<sup>80</sup> See Sen (1988), p. 187-223.

<sup>81</sup> Sen (1988), p. 197.

<sup>82</sup> Sen (1987), p. 61-78, and Sen (1988).

the position of people to influence their evaluation of states of affairs. Hence, a position-sensitive goal rights system may allow me as an outsider to make a trade-off, in the evaluation of states of affairs, between, for example, Rawlsian poverty in impoverished countries and other goals, and at the same time claim that poor people should reject any trade-off between other goals and changes in their situation in the evaluation of states of affairs. Within this setting, then, the difference between my normative ranking of states of affairs and the one endorsed by those who are poor is solely explained by the fact that we occupy different positions in society.

One problem with this proposal is that it makes the link between the normative ranking of states of affairs and a reasonable behaviour (or policy) difficult to understand. Are we to act on the normative ranking of states of affairs obtained from our position, or do we have to take into account the fact that people in other positions sometimes endorse a different normative ranking? If we have to take into account the normative ranking obtained in every position within this system, then we face a version of the basic problem we have discussed throughout the essay (to wit the problem of how to balance various normative rankings, which in structure is the same as how to balance various people's interests). On the other hand, if we are to act on the normative ranking obtained from our own position, then we face the problem that we sometimes attempt to bring about consequences which other reasonable people - even though they find our ranking sensible by taking notice of our position - may try to prevent (because from their position the act causes a worse state of affairs). Thus, even though a position-sensitive normative framework may partly accommodate the Kantian idea in the evaluation of the goodness or badness of states of affairs (by allowing people in particular positions - for example the poor - to reject any trade-off between Rawlsian poverty and other goals), it faces the same problem as any other normative framework with respect to the description of reasonable behaviour (or policy).

The tension between deontological constraints and teleological reasoning is a difficulty which we ought to consider seriously.<sup>83</sup> It is hard to avoid doing trade-offs between people's interests in normative reasoning, and such a thinking is frequently needed in order to be able to choose one course of action instead of another. A position-neutral goal rights system provides, as I see it, an appealing framework for

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<sup>83</sup> On this issue, see also Taurek (1977).

our thinking on these issues, by allowing a trade-off between deontological reasoning and other goals, and at the same, and contrary to utilitarian reasoning, attaching intrinsic importance to deontological arguments. There is a further question about how to incorporate various deontological arguments in this structure, but it is beyond the scope of this essay to provide a comprehensive discussion of that problem. I now turn to an elaboration of the idea of poverty as the lack of a reasonable share of resources in society, and ignore any further questions about how to understand the link between aggregate poverty and social choices.

## **6. Rawlsian Poverty**

Three important questions are discussed in brief in this section. First, how are we to understand the spatial assumption needed in order to make sense of Rawlsian poverty? Second, what is a plausible definition of a reasonable share of the resources in a society? And third, is there any overlapping consensus between the Rawlsian and utilitarian definition of the concept of poverty?

Rawlsian poverty may be interpreted within a global, national or local context,<sup>84</sup> and the relevance of reported poverty figures depends on the importance attached to the underlying spatial assumption. People who are classified as Rawlsian poor within a national context may very well possess a reasonable share of the resources if we adopt a global perspective (or the opposite may be the case if the point of departure is an impoverished nation). It has been claimed, though, that there are no plausible normative arguments which can be used in order to defend a local or national analysis of the Kantian perspective; "[w]e rely on global economic and political processes, so cannot consistently insist that justice (conveniently for the developed world) stops at state frontiers".<sup>85</sup> This may be interpreted as saying that any appropriate scheme of duties ought to ignore international boundaries, and, hence, that the process of justification of our acts cannot be narrowed down to only include members of the community or nation we belong to. However, that may be to overstate a relevant

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<sup>84</sup> Here, I ignore any intergenerational interpretation of Rawlsian poverty, but that is also an issue which ought to be taken into account in a comprehensive discussion of this concept. Moreover, notice that the underlying motivation of the normative reasoning present in this essay (to wit our desire to be able to justify our actions to others on grounds they could not reasonably reject) deviates somewhat from the underlying motivation of the framework of Rawls. This difference may be important in a discussion of the scope of our obligations; see Tungodden (1994c).

<sup>85</sup> O'Neill (1993), p. 314. See also O'Neill (1986).

argument. It appears reasonable to argue that people in fact have special obligations towards those who live close to them, and that national (or local) Rawlsian poverty can reflect how successful people are in fulfilling these obligations.<sup>86</sup> Alas, in this essay I shall not elaborate on the appropriate link between the various obligations that we may face within the Rawlsian framework. A moderate conclusion, though, may be to say that international boundaries should not be interpreted as cut-off lines for our obligations, but that they may indicate a change in the strength of these obligations.

How are we to define a reasonable share of the resources when the appropriate context is clarified?<sup>87</sup> Three possibilities exist. First, we may argue that every citizen ought to be entitled to a certain percentage of the resources available in society, where the percentage is independent of the total amount of resources available. That is how we may understand the poverty standard of the European Commission, where the poor population is defined as people with less than 50% of the median disposable income in the country in question. On the other hand, we may argue that the appropriate percentage has to depend on the total amount of resources available in that society. Two conflicting arguments can support this view, and, consequently, guide us in opposite directions. We may claim that the tension (between fulfilling moral obligations and pursuing personal aims) within each member of the better-off group is stronger in impoverished societies, where the better-off group also may be rather badly off. The ideal actor recognises that problem of the better-off group behind the veil of ignorance, and, therefore, chooses less redistribution than in an affluent society. On the other hand, the demands of the worse-off group in an impoverished society are probably far more stringent than in an affluent society, and that may cause the ideal actor to choose an even more equal distribution of resources in these situations.

There is also a third option that merits mentioning within this setting. It is possible to argue that the Kantian obligation of the members of the better-off group is to support the members of the worse-off group to the extent that they attain a minimum level of well-being, which, thus, is to claim that no one ever can argue that he or she is treated

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<sup>86</sup> These obligations may be of both of instrumental and intrinsic importance; on this issue, see Sen (1984), p. 290-300. See also Dower (1991).

<sup>87</sup> See Tungodden (1994b) for a discussion of the implications of various definitions of a reasonable share of the resources for the social ordering on various distributions within the least advantaged segment.

merely as a mean if they have attained a level of well-being above this minimum standard. (Of course, within this view one also has to specify what a reasonable share of the resources ought to be if the society has fewer resources than what is needed in order to provide everyone with this minimum standard.) This view marks a fundamentally different position from the two discussed above; the underlying idea is here that people only are obliged to contribute to the improvement of the conditions of the least advantaged segment as long as this group has a level of well-being below a given minimum standard. But what ought this minimum standard be like? One may, of course, link the minimum level of well-being to the meeting of needs that are a prerequisite for the continuation of people's lives, but I find it more plausible that an ideal actor behind a veil of ignorance - if she endorses this position - would favour a more comprehensive definition of the minimum standard.

To focus on a narrow definition of the minimum level of well-being may, however, be of practical interest in order to attain agreement about the importance of reported poverty figures. Poverty in the utilitarian framework is about identifying people with particularly intense desires, and it should not be very controversial to assume that people who lack food, shelter, water, clothing and alike are one such group. There are, of course, also other groups with intense desires, but poverty figures that report changes in the conditions of this group of people are undoubtedly essential within a utilitarian framework. Moreover, these figures are at the same time important from a Rawlsian point of view (at least if we accept the framework of a positional-neutral goal rights system), because in most cases, if the society is not too impoverished, they represent people who are merely treated as means according to any plausible interpretation of the Kantian principle. Hence, though the underlying reasoning differs fundamentally, there is probably a certain overlapping consensus between the Rawlsian and the utilitarian framework about the importance of poverty figures of this kind.

This is, of course, an all-too-brief discussion of the content of the various positions which one may take up on the question of how to understand Rawlsian poverty. But, hopefully, the discussion has emphasised the importance of clarifying the structure of the underlying foundation of various poverty figures. We cannot expect complete agreement on how to interpret the concept of poverty, but we ought to pursue a transparent understanding of the normative foundation of reported poverty figures. In

that respect, I believe the Rawlsian understanding of poverty (as the lack of a reasonable share of the resources in society) represents one fruitful approach. And I now apply the Rawlsian framework in order to clarify a deep disagreement present in the poverty measurement literature, to wit about whether to endorse an 'absolutist' or 'relativist' understanding of the concept of poverty.

## 7. Absolute or Relative Poverty

There is a well-known controversy between Sen and Townsend on this topic.<sup>88</sup> Townsend has, in his work on poverty, emphasised the importance of including social needs among the basic needs of individuals, and he is thereby in line with a tradition which goes back to Adam Smith: "By necessities I understand not only the commodities which are indispensable necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even the lowest order, to be without...Custom...has rendered leather shoes a necessary of life in England. The poorest creditable person of either sex would be ashamed to appear in public without them".<sup>89</sup> The demands of society will, of course, change over time and vary among cultures, and Townsend rejects on this basis the fundament for absolute poverty. However, as Sen underlines, the need for, for example, social participation can be perceived as a constant element in the definition of absolute poverty. The relative aspect in Townsend's argument is only referring to an instrumental space, i.e. to what commodities that are needed in order to participate in social life. Thus, Townsend's claim (according to Sen) cannot be counted as an attack on the absolutist view on poverty, but rather as an important contribution in the debate about what ought to be taken into account in a definition of absolute poverty.

However, as should by now be clear from our discussion, it is also possible to defend a relativist approach to poverty within a space of intrinsic importance.<sup>90</sup> If we adopt a Rawlsian understanding of poverty, we may argue that whether people with a particular level of well-being are poor or not ought to depend on the level of well-being enjoyed by the rest of the population. Thus, an intrinsically relativist approach to poverty is not to be explained by the variable commodity requirement needed in

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<sup>88</sup> See Townsend (1985) and Sen (1985).

<sup>89</sup> Adam Smith in *The Wealth of Nations* (see Sen (1984), p. 333).

<sup>90</sup> See Sen (1992), p. 116, as well.

order to attain a particular level of well-being, but by reference to the Kantian obligation we have to guarantee that everyone in society is entitled to a reasonable level of well-being. And the importance of the concept of Rawlsian poverty is easily seen if we discuss aspects as life expectancy and infant mortality. People are Rawlsian poor when their life expectancy at birth is 35-45 years (as in for example Bangladesh, Benin, Chad, Ethiopia, Gambia, and Nepal) when at the same time the life expectancy in our part of the world is 75-80 years.<sup>91</sup> But the same group of people can hardly be characterised as poor in a Rawlsian framework if everyone's life expectancy in the relevant society in fact is 35-45 years. Hence, the Rawlsian framework may capture an important part of a plausible interpretation of the concept of poverty, which is easily neglected by solely focusing on the idea of absolute poverty.

## **8. Final Remarks**

The interpretation of the concept of poverty as the lack of a reasonable share of resources links poverty to the idea of inequality, but it does not make the content of the two concepts the same. Inequality (in the level of well-being enjoyed by various people in a society) is needed in order to explain Rawlsian poverty, but some inequality may also coexist with the absence of Rawlsian poverty (as should be obvious from the discussion in section 6). Hence, Rawlsian poverty provides one reason for why we ought to be concerned with the presence of inequality in a society, but there are also other reasons (such as the one derived from utilitarian reasoning) which may be linked to the issue of inequality.<sup>92</sup>

The idea of Rawlsian poverty introduced in this essay is vague, and it does not settle the question about the appropriate definition of a reasonable share of resources. Hence, the statement of the Secretary of State for Social Security in Britain can be defended within a Rawlsian framework by either appealing to a global context as the appropriate spatial assumption (though it is far from obvious that no one in Britain is

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<sup>91</sup> See Dasgupta (1993), p. 118-119, for figures on the life expectancy at birth for people in various developing countries.

<sup>92</sup> See Atkinson (1970) for an illuminating discussion of the link between the utilitarian framework and the idea of inequality.

below the poverty line derived from that assumption<sup>93</sup>), or by appealing to a very low level of well-being as the appropriate minimum standard to be used in the discussion of our Kantian obligation (independent of whether the society in question is affluent or impoverished). Neither of these assumptions would be indisputable, though, and there are strong arguments that can be used in order to defend a very different position from the one taken up by the Secretary of State. The importance of the idea of Rawlsian poverty elaborated on in this essay is that it provides us with a framework for this type of discussions.

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<sup>93</sup> See for example the discussion in Sen (1992), p. 114-115, on the extent of deprivation in the world's most affluent countries.



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# 3

## Rationality, Value, and Well-Being<sup>1</sup>

### 1. Introduction

Is there anything that makes my life better or worse? Anything I should aim at or try to avoid? I think so, and most people agree. But would the same elements also improve or worsen other lives? Are there any objective elements in the description of the quality of life? If so, what are these elements? And what makes them valuable? These questions are discussed in this essay, where the aim is to shed some light on the idea of rationality in individual choices, the concept of well-being, and the problem of interpersonal comparisons of well-being.

If there are things that I ought to pursue in order to improve my well-being, then these things - if I am aware of them - should have an influence on my choices. However, they are not necessarily the only things that may affect my choices; I may for example also view myself committed to acts which sometimes reduce my own level of well-being.<sup>2</sup> In this essay, though, I neglect these other aspects which may affect my choices, and take up a well-being interpretation of preference.<sup>3</sup> In section 2, I discuss

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<sup>1</sup> For their comments on earlier versions of this essay, I am grateful to Bernt Christian Brun, Rune Jansen Hagen, Ottar Mæstad, Derek Parfit, Agnar Sandmo, and Svein Aage Aanes.

<sup>2</sup> The claim that people sometimes choose an alternative which may reduce their own level of well-being is often met by scepticism ("Be honest now, there was also something in it for you!"). The problem in a discussion of this issue is, of course, the difficulty of doing upright introspection of the motivation of your own choices, but still I see it as plausible that people sometimes are motivated by something else than self-interest. Note as well, that people rejecting this position do not necessarily endorse a narrow interpretation of the structure of people's motivation; see for example Becker (1992): "I have tried to pry economists away from narrow assumptions about self-interest. Behaviour is driven by a much richer set of values and preferences" (p. 385). On this issue, see also Hausman and McPherson (1993,1994), Nozick (1981,1989,1993), Parfit (1984), Rawls (1993), Sen (1982,1992,1994), and Walsh (1994).

<sup>3</sup> See Tungodden (1994a) for a discussion of the underlying structure of our social choices.

some seemingly inevitable implications of the framework of rational choice theory; in section 3, I elaborate on the understanding of the concept of well-being; and in section 4, some important issues on interpersonal comparisons of well-being are discussed.

## 2. Rationality and Value

The conventional theory of individual rationality imposes the properties of completeness and internal consistency on people's preference structure. And the presence of these two properties ensures that there is always at least one 'best' element in the set from which people have to choose.<sup>4</sup> The requirements of completeness and consistency may be interpreted as either hypotheses or axioms about the foundation of individual motivation, and - for reasons that soon will be made clear - the latter interpretation has the upper hand in this essay. The aim of the discussion in this section is to consider the reasonableness of assuming that there always is at least one 'best' element in the set from which people have to choose (this topic is also discussed further in section 3), and, moreover, to indicate the deeper ethical implications of endorsing the framework of rational choice theory.<sup>5</sup>

But let us first consider the idea of interpreting these requirements as hypotheses. It has been argued by Sen that the possibility of actually testing conditions of consistency is rather limited, and I should like to elaborate - and maybe strengthen - that claim somewhat.<sup>6</sup> For that purpose, consider the following dialogue (taking place during the annual family party) between cousin *R* (who is a researcher concerned with the empirical validity of the consistency hypothesis in rational choice theory) and cousin *F* (who is a farmer with a particular interest in the behaviour of guinea-pigs):<sup>7</sup>

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<sup>4</sup> The property of consistency may be defined in various ways; the requirement of transitivity is the most common, but it may be substituted by a requirement of either quasi-transitivity or acyclicity; on this issue, see Sen (1970). The discussion in this essay is only concerned with choices under certainty, but see Broome (1991) and Hausman and McPherson (1993) for a discussion of the structure of rationality underlying expected utility theory.

<sup>5</sup> On these issues, see also von Wright (1987), p. 151-155, and Sen (1987a).

<sup>6</sup> Sen (1982), p. 3.

<sup>7</sup> The consistency hypothesis that cousin *R* has in mind in this example is the one introduced by Samuelson (1948), to wit that if *x* is revealed preferred to *y* by a person, then *y* would never be revealed preferred to *x* by this person. The close relationship between this idea and the idea of transitivity is discussed in Sen (1973). See also Sen (1993a) for the discussion of a similar example.

*R*: My dear cousin, I have to say that your behaviour is rather inconsistent today.

*F*: What do you have in mind, cousin *R*?

*R*: Well, I just observed that you first rejected aunt Bessie's offer of a slice of apple-pie, and then, in the next moment, accepted the same offer from her.

*F*: But, my good friend, there was no inconsistent pattern present in those choices. Did you not notice a difference between the two offers from aunt Bessie?

*R*: Admittedly, I did not.

*F*: I am baffled, I thought you were a trained observer. Anyway, the difference was the following: There was only one slice left on the plate the first time aunt Bessie offered me apple-pie. When she returned from the kitchen, however, there were several pieces on the plate. I accepted her second offer, therefore.

*R*: Oh, I see. So the difference between the alternatives you faced the first time was not only between having a slice of apple-pie or not, but also between being perceived as a well-behaved or a greedy guy by the rest of the family. And, surely, this latter distinction was absent when you made your second choice. Of course, that explains the seeming inconsistency in your behaviour. Well, I can really understand that you wanted to avoid the embarrassment of being perceived as a greedy guy.

*F*: No no, that is a misconception of the situation. It is true that several members of the family would have perceived me as greedy if I picked the last slice of apple-pie. But, honestly, I am completely unconcerned about whether the family perceive me as a well-behaved or a greedy guy. However, I also knew that you would have been amused by the talk about 'the greedy cousin *F*', and that was what made me reject the first offer from aunt Bessie.

*R*: I am surprised and disappointed. I would certainly not be amused by such talk. But be that as it may, the important issue is that your behaviour was not at all inconsistent.

*F*: That is true, you can take my word for it.

The hypothesis about consistency in people's behaviour is unverifiable unless the observer is able to see inside people's heads, because any seeming inconsistency may derive from a misunderstanding of the real alternatives faced by the person in question. We may, of course, ask the person whether the alternatives faced in the two situations were identical from his position, but that is the same as to ask him whether he in fact acted consistently. Obviously, we are unable to verify whether the given answer is true or not. It follows straightforwardly that we face the same type of problems in a verification of the hypothesis about completeness in people's preference structure, and, hence, we shall concentrate on the question about the reasonableness of assuming that people always view at least one of the elements in the set from which they have to choose as 'best'. This question is, as should become evident shortly, important in a discussion of the scope of human behaviour that may be analysed by the use of the framework of rational choice theory.



In order to be able to select a 'best' alternative, people need one or several criteria. One possibility is, of course, to say that people are born with a complete and consistent preference structure, i.e. their understanding of the 'best' alternative among a set of alternatives is nothing but a reflection of a predetermined biological preference structure. (But why should the force of evolution bring about a complete and consistent preference structure?) Another suggestion may be to say that our preference structure is entirely shaped by the era into which we happen to have been born, by our parents, and so on.<sup>8</sup> However, these arguments - despite their obvious relevance - can hardly provide a complete understanding of this issue. They certainly explain why someone prefers apples to pears or blue cars to red cars, but at the same time they delineate a too narrow picture of what it is to be a human being. We do not conceive ourselves - rightly I think - as merely playthings of external forces (that may be biological or sociological), but also as individuals who reflect and seek reasons that may guide our behaviour throughout our lives. We have all been pondering on hard choices, where the process of choosing has involved reflection beyond straightforward introspection of what the inescapable part of our preference structure has to tell us in this situation.

Hence, it becomes relevant - in order to evaluate the appropriateness of the axioms of consistency and completeness - to discuss the content and structure of the various reasons that may constitute the foundation of our preference structure. (In this discussion, the reader should keep in mind that we are only concerned with the well-being interpretation of preference.) By way of illustration, consider the choice of career, and assume that someone may become either a lawyer or a forester.<sup>9</sup> This person wants to choose the profession that gives her the highest level of well-being. One problem (stressed by Elster) is that she has incomplete information about both professions. But let us for the sake of the argument assume that she already had tried both for a lifetime. Would there then necessarily be a 'best' alternative? What type of information could persuade her to say that the life as a forester is better than the life as a lawyer (or maybe to say that the the choice of profession does not influence her level of well-being)? Elster's suggestion seems to be that she ought to choose the

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<sup>8</sup> See Becker (1992), and Griffin (1991).

<sup>9</sup> This choice is also discussed by Elster (1989), p. 9-10.

career that makes her more happy.<sup>10</sup> And the Benthamian idea will provide us with a reason that may constitute the framework of the axioms of completeness and consistency in rational choice theory. Various alternatives can within this setting be ranked according to how much happiness they bring about for the person in question, and, thus, through the lenses of the Benthamian idea, there is always at least one 'best' alternative in every situation.

Happiness is an elusive concept,<sup>11</sup> and I shall, in the next section, consider alternative approaches to the concept of well-being. But be that as it may for the moment. The introduction of happiness in the reasoning of Elster is important, because it illustrates the close link between a discussion of rational choices and a discussion of our understanding of the valuable objects that constitute the concept of well-being. If there were no valuable objects, then the concept of well-being would be meaningless, and there was no reasoning for pondering.<sup>12</sup> Within such a framework, there would be nothing that anyone should consider as good or bad in their lives. Hence, the idea of betterness would be meaningless, and the person should simply toss a coin when choosing between two alternatives. (The reader may object, and argue that the person still could use the inescapable part of her preference structure in some cases. But why should the person choose the alternative she inevitably desires? Why should she not sometimes choose contrary to her inclinations?<sup>13</sup>) In a world without values - which is the world of an ethical nihilist - there is nothing to pursue.<sup>14</sup> Hence, in such a world there is no deeper foundation for the properties of completeness and consistency in individual choices. Why should the internal structure of our choices be consistent if there is nothing worth pursuing? And for the very same reason, why should we then, in any situation, prefer one alternative to the other?

Consequently, I want to claim that rational choice theory has to be interpreted within a non-nihilistic framework, i.e. axioms of consistency and completeness can only be of interest if people in general believe that there are valuable and disvaluable objects.

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<sup>10</sup> Elster (1989), p. 10, footnote 29.

<sup>11</sup> See Parfit (1984) and Griffin (1986) for a discussion of the concept of happiness.

<sup>12</sup> Taylor (1993) has made a similar claim: "[W]e cannot understand ourselves, or each other, cannot make sense of our lives or determine what to do, without accepting a richer ontology than naturalism allows" (p. 212).

<sup>13</sup> See also Sen (1987c), p. 202.

<sup>14</sup> For brief discussions of ethical nihilism and scepticism, see Nozick (1981), Parfit (1984), Putnam (1993), and Taylor (1993).

That, however, is not to say that we ought to embrace the idea of a world of values or the framework of rational choice theory, but rather that there is a close link between these two ideas.<sup>15</sup> In fact, there are interesting results reported by psychiatrists about the problems of increasing nihilism in society that illustrate the inappropriateness of the rational choice model in certain contexts. It is reported that the problem of 'Borderline Personality Disorder' - which is defined by the following (among others) diagnostic criterion: "marked and persistent identity disturbance manifested by uncertainty about ...long-term goals or career choice...[and]...preferred values..." - is increasing in the young part of the population due to the (for many) seeming lack of meaning in our modern world.<sup>16</sup> Obviously, people who find it difficult to perceive anything of value in our world will not fit into the framework of rational choice theory.

But I find it reasonable to assume that the general opinion in society is that it makes sense to talk about valuable and disvaluable objects, and, thus, it becomes of interest to discuss the nature of these objects. That is the topic of the next section, where I elaborate on possible interpretations of the concept of well-being. However, I should like to end this section by in brief indicating the status of values within economics, and, moreover, with some remarks about possible misinterpretations of the arguments outlined so far. First, what is the present view on values within our profession? The standard approach is to claim that "we deal with people who maximize their utility, and it would be both inconsistent and idle for us to urge people not to do so".<sup>17</sup> However, as is well-known, a utility function is nothing but an appropriate phrase for the mathematical representation of people's preferences, and thus - despite its rhetoric elegance - the claim does not say anything of substantial importance about the underlying foundation of our preference structure.<sup>18</sup> It simply states that we have a complete and consistent preference structure that guides our choices, and leaves the question about the origin of this preference structure unanswered. Hence, it is of more

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<sup>15</sup> This link is very explicit in the writings of Rawls (1971,1993): "This idea [of goodness as rationality] supposes that the members of a democratic society have, at least in an intuitive way, a rational plan of life in the light of which they schedule their more important endeavours and allocate their various resources...so as to pursue their conceptions of the good over a complete life, if not in the most rational, then at least in a sensible way" (1993, p. 177).

<sup>16</sup> Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, Washington D. C. 1987, p. 347). I am indebted to Nina Tungodden for this reference; see also Tungodden (1992).

<sup>17</sup> Stigler (1981), p. 150.

<sup>18</sup> On this issue, see also Cooter and Rappoport (1984).

interest to relate our discussion to the claim of Sugden about economists as moral subjectivists who argue "that the moral world contains alternative theories of the good life, and that which theory any individual accepts is a matter of personal taste or private commitment".<sup>19</sup> This claim acknowledges that the foundation of the preference structure (at least partly) is related to a conception of the moral world, and if this is the standard view within economics, then it is somewhat surprising that so many economists have been reluctant to discuss value issues. It should be of a certain interest - for those who endorse the claim of Sugden - to discuss which theories that constitute the moral world, even though the choice of theory should be a matter of personal taste or private commitment (whatever that means). In fact, willy-nilly, economists do make claims about values. It is for example commonly assumed that the utility function of people is defined on consumption and leisure, and assumptions of this kind ought to reflect (if we are not simply playthings of external forces) the view that there is a dominant underlying conception of the good life in society.<sup>20</sup> In the next section, I shall elaborate on various views on the realm of value that may explain our preference for (by way of illustration) consumption and leisure, and which may enrich our understanding of the motivational sources of human behaviour.

A further clarification of the content and structure of the realm of values may solely be motivated by an interest in predictive issues (as I shall illustrate by an example in section 3). However, as should be evident from the quoted statements, arguments about values are often interpreted within a normative setting, and in that respect I shall like to make a few remarks on possible misinterpretations of the present discussion. First, the arguments advanced in this section have had nothing to say about the status of preference autonomy.<sup>21</sup> Obviously, if it is to be meaningful to say that some objects are valuable, then there also have to be disvaluable objects, and, consequently, sometimes we may pursue the wrong ends. But whether anyone should try to stop us from doing things that are bad for us (if they by any chance should have more knowledge in this situation than ourselves), is a social choice which it is beyond the scope of this essay to discuss (but offhand I guess the idea of liberty is of utter

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<sup>19</sup> Sugden (1993), p. 1953.

<sup>20</sup> One possibility, though, may be (as suggested by Rawls (1971, 1993)) that some goods are all-purpose means, i.e. that they may serve all the various conceptions of a good life. But in order to evaluate the reasonableness of this assumption, we have to clarify the various conceptions of a good life that may be present in the realm of value. Hence, assumptions of this kind do not erase the relevance of the present discussion. On this issue, see also Sen (1992).

<sup>21</sup> On this issue, see Broome (1978), Harsanyi (1976), and Scanlon (1991).

importance in this context).<sup>22</sup> Next, the aim of this section has not been to argue that the acknowledgement of valuable and disvaluable objects is sufficient in order to make the assumptions of rational choice theory reasonable in every situation. The presence of a realm of values may still imply some incompleteness in the preference structure of people, because, in certain situations, there can be irreducible conflicts between the values involved (an issue I shall return to in section 3).<sup>23</sup> Schelling has illuminatingly illustrated this problem: "How do we know whether an hour of extreme pain is more than life is worth? Alternatively, how do we know whether an hour of extreme pain is more than death is worth? The conclusion that I reach is that I do not know, not for you and not for me".<sup>24</sup>

### 3. Value and Well-Being

There are at least two substantial questions about the structure of the realm of values.<sup>25</sup> The more ambitious question is to ask about what makes certain objects valuable. In order to answer such a question, a general theory of value is needed.<sup>26</sup> If we were able to outline this general theory of value, we would also be able to list (and rank) the particular objects that are valuable. A more mundane question, though, is to just ask about the content of a list of valuable objects, without demanding a deeper explanation of what it is that makes these objects valuable (though we should expect some kind of defence to go with a claim of this kind). An example may clarify the distinction. Consider the claim of Schelling quoted at the end of the preceding section. Schelling assumes that pain is a disvaluable object, i.e. the presence of pain in a person's life decreases her well-being. That is a fair suggestion, but we may still ask why pain should be such a disvaluable object. It is in order to answer such a question that we need a general theory of value. However, the more mundane question is at issue in this section, and I now turn to a discussion of whether the unrestricted desire theory may convey a reasonable understanding of the concept of well-being.<sup>27</sup>

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<sup>22</sup> On this issue, see Hausman and McPherson (1994). Some difficult questions in this respect have been discussed by Schelling (1984).

<sup>23</sup> See also Sen (1987a), p. 66-67.

<sup>24</sup> Schelling (1984), p. 9.

<sup>25</sup> See also Scanlon (1993), p. 190.

<sup>26</sup> On this question, see Nozick (1981), p. 399-457.

<sup>27</sup> See also the discussion in Scanlon (1993) and Sen (1987b) on this issue.

The basic structure of the unrestricted desire theory is simple. Fulfilment of any desire makes a life better, because the valuable object in life is fulfilment of desires. We may say that fulfilment of desires has intrinsic value. Anything, however, may have instrumental value, i.e. anything may be valuable because it contributes to the fulfilment of desires. If a person desires friendship, self-respect, and a nice meal, then the introduction of these things in his life contributes to an improvement of his well-being (by increasing the number of desires fulfilled). Hence, it follows from this framework that a person ought to rank various alternatives according to how much they contribute to the fulfilment of his desires (where the fulfilment of intense desires is to be considered as more valuable than the fulfilment of weak desires). Of course, this also covers cases that involve endogenous preferences - the person always ought to choose the alternative that has most desire-fulfilment, independent of the type of desires that are fulfilled in the various alternatives. Thus, the unrestricted desire theory would provide us with the necessary foundation for acquiring a complete and consistent preference structure.

The choice of career is rather trivial in the light of the unrestricted desire theory if we possess complete information about the content of both alternatives; the life as a forester is better than the life as a lawyer if it contains more desire fulfilment (where, once again, desire fulfilment in any alternative is to be measured in relation to the preference structure occupied in the respective alternative).<sup>28</sup> More generally, some interesting predictions may be made about preference formation if we assume that people perceive the unrestricted desire theory as a reasonable representation of the realm of values, and I should like to briefly mention one of them here, by introducing an idea from the theory of network externalities. The theory of network externalities argues that "the utility that a given user derives from the good depends upon the number of other users who are in the same 'network' as is he or she".<sup>29</sup> The personal computer market may exemplify this idea, where "an agent purchasing a personal

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<sup>28</sup> This line of reasoning may be important for many economic choices. Consider, by way of illustration, the question about migration discussed by (among others) Bliss (1993). Bliss asks us to imagine a farmer that reflects on the possibility of moving to the city. The farmer knows that he will adapt to city life, and moreover he possesses complete information about the two alternatives. What is he to do? Bliss claims - without any further reasoning - that "with a fundamental change [in preference structure], the problem looks impossible" (p. 426). However, as illustrated above, the choice is trivial if the farmer perceives the unrestricted desire theory as a reasonable representation of the realm of value.

<sup>29</sup> Katz and Shapiro (1985), p. 424.

computer will be concerned with the number of agents purchasing similar hardware because the amount and variety of software that will be supplied for use with a given computer will be an increasing function of the number of hardware units that have been sold".<sup>30</sup> Now, interpret the hardware as the person's preference structure and the software as the kind of commodities needed to fulfill the most intense desires derived from this preference structure. By applying the same line of reasoning as present in the discussion of the personal computer market, we may argue that the amount of desire fulfilment that a person can derive from choosing a particular preference structure depends upon the number of people that choose the same preference structure. This argument thus indicates that there is a reason for rational people to join the dominating 'network' in society when they choose their preference structure, and, hence, we may predict an extensive overlapping among the preference structures of people in society.<sup>31</sup> Obviously, it is possible to produce contrary arguments, but I shall not consider them here.

But how plausible is the unrestricted desire theory as a description of the realm of values? The framework is to some extent intuitively appealing, because it appears to capture an important part of our thinking on the concept of well-being. A life without the fulfilment of any desires seems to be unbearable, and it appears rather innocuous to claim that a person that lives such a life has an extremely low level of well-being. Thus, to claim that desire fulfilment constitutes the relevant aspect of well-being may at first glance be perceived as reasonable (and inevitable). But an unrestricted desire theory faces some deep problems, and I shall in a moment explain why I find it implausible that the unrestricted desire theory provides an adequate understanding of our view on the realm of values. However, first I shall like to invalidate two unreasonable claims against the unrestricted desire theory. In that respect, consider the following example:

**Example A:** I have a desire for a glass of water. There is a glass at my table. I believe it contains water, and, thus, I desire it. It contains, however, fatal poison.

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<sup>30</sup> Katz and Shapiro (1985), p. 424.

<sup>31</sup> Some readers may find this argument somewhat obscure, because they find it difficult to understand the process of choosing a preference structure. I guess the reason is that the wording is somewhat unfamiliar. Rational preference formation may straightforwardly take place by for example choosing friends and career (and so on) that you expect will influence your preference structure in the wanted direction. See also the discussion in Becker (1992) on rational preference formation within the family.

This example has been discussed by Hausman and McPherson.<sup>32</sup> They argue that it illustrates the problem that false beliefs impose on an unrestricted desire theory, because they conclude that this theory says that my well-being is improved when I drink the glass of poison (after all, I have a desire fulfilled).<sup>33</sup> Clearly, no one would find such a claim reasonable, and, thus, it seems like the unrestricted desire theory is embarrassed by Example A. However, that is not the case, and I want in brief to indicate where the reasoning of Hausman and McPherson has gone astray. They claim that my desire for a glass of water is fulfilled when I drink the glass of poison. That is in some sense true if I do not notice the distinction between water and poison when I drink the glass of poison. I desire the psychological state of drinking a glass of water, and this is in fact the experience I have when I drink the glass of poison (and believe that I drink water). And if that were the only consequence of my act, then we could join the conclusion of Hausman and McPherson. However, by drinking the glass of fatal poison I also cause my own death, and, obviously, that reduces the number of desires fulfilled in my life. The unrestricted desire theory says that I should choose the alternative that brings about most desire fulfilment in my life, i.e. I should not drink the glass of poison. Hence, if I drink the glass of poison, I act wrongly according to the unrestricted desire theory.

False beliefs may be problematic with respect to social choices (though not in this particular case), but they do not pose a problem for the unrestricted desire theory as the foundation for the concept of well-being.<sup>34</sup> The next example indicates that it would be unreasonable to neglect desire-fulfilment derived from false beliefs in a discussion of a person's level of well-being.

**Example B:** I have a desire for being a good father. I believe that I am a good father, but the truth is that I am not.

There is, however, an ambiguity in example B that has been considered to be of a certain interest. In general, my desire for a specific state of the world can be on two different levels. First, I may desire a state of the world because I desire the experience of this state of the world. If that is the kind of desire I have in mind in example B, then my desire is fulfilled when I believe that I am a good father. We may say that I

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<sup>32</sup> Hausman and McPherson (1993,1994).

<sup>33</sup> Hausman and McPherson (1994), p. 396.

<sup>34</sup> See Broome (1991), chap. 8, for a discussion of the problem of false beliefs in social choices.



only have a derived desire for a specific state of the world, i.e. the state of the world is only important in order to bring about the fulfilment of my desire for a particular mental state. However, the desire in example B may also be a desire for being a good father as such, and not only a desire of believing oneself to be a good father. If that were the case, then - according to the unrestricted desire theory - my well-being is lower than I assume in example B (because I wrongly believe that I am a good father). Some people find this implication of the unrestricted desire theory troublesome, because they view it as implausible that one's well-being could depend on anything else than the fulfilment of desires for mental states.<sup>35</sup> But consider now the following example:

**Example C:** I have a desire for being a good father. I believe that I am not a good father, but the truth is that I am.

Does the reader find it straightforward to say that my level of well-being is higher in B than in C? I do not, though I admit that a thorough discussion is needed in order to settle any dispute on this question. However, I shall not elaborate on the various pros and cons here, but only comment on one line of reasoning that I find unreasonable in a discussion of this issue, to wit the line of reasoning that refers to the problem of measurement in a justification of a narrowing of the concept of well-being.<sup>36</sup> Someone may for example support the claim that the experienced quality of a person's conscious life ought to constitute our understanding of the concept of well-being by the following argument: "Everyone should be able to precisely evaluate changes in one's own level of well-being". But, obviously, it is impossible to say whether one is able to measure an object or not before we have defined the object which we are about to measure, and, thus, it does not make sense to impose such an a priori restriction on the concept of well-being. It may very well be the case that we are unable to measure precisely our own - or other people's - level of well-being, but that is a question we should discuss when we have acquired a definition of the concept of well-being that we find plausible. (I shall return to this issue in section 4.)

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<sup>35</sup> People who make a claim of this kind are sometimes called preference-hedonists. See Parfit (1984) and Scanlon (1993) for a more comprehensive discussion of their argument, and the connection to the hedonistic view of Bentham.

<sup>36</sup> See for example Bliss (1993), p. 417-418.

The shortcoming of the unrestricted desire theory, however, is straightforwardly seen from the following example:

**Example D:** I may choose to become a drug addict. I am assured sufficient supplies of drugs for the rest of my life. A life as a drug addict would thus consist of fulfilment of extremely intense desires (for injection of drugs). (My life expectancy is independent of whether I choose the life as a drug addict or not.)

The unrestricted desire theory claims that I enjoy a high level of well-being as a drug addict, because my life consists of the fulfilment of a large number of extremely intense desires. That is an unreasonable claim, because the overall condition of living achieved by a drug addict cannot be characterised as valuable.<sup>37</sup> Surely, the drug addict has an enormous amount of desires fulfilled, and there is no other way of achieving more desire fulfilment. But the life as a drug addict lacks achievement in every other dimension of life, and that makes us hesitant to accept the claim of the unrestricted desire theory. Thus, there seem to be other things than the amount of desire fulfilment that we perceive as valuable, and the absence of these things in the life of the drug addict causes us not to choose the life as a drug addict (if we had the opportunity discussed in example D).

Some readers may want to argue that the drug addict has a desire for a disvaluable object, and - if this claim is reasonable - we may question whether desire fulfilment should be considered a valuable object in example D?<sup>38</sup> This is a difficult issue, and various views may be advanced. On the one hand, we may claim that desire fulfilment is not a valuable object in itself, but only important in order to extract the value potential present in various situations.<sup>39</sup> Hence - according to this interpretation

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<sup>37</sup> See also Parfit (1984), p. 496-498. Parfit argues that there may be another version of the unrestricted desire theory which can be applied in cases of this kind, to wit one may say that people also have global desires for one's life considered as a whole, and that the fulfilment of global desires has lexicographic priority in the evaluation of a person's level of well-being. Hence, if I have a global desire for a life not addicted to drugs, then I have a low level of well-being if I in fact become a drug addict. Thus, the global version of the unrestricted desire theory seems to avoid any embarrassment from example D. However, this presumes that our global desires may be unconnected with the fulfilment of local desires in each life (otherwise, I should desire the life as a drug addict). But if that were the case, then people may have a global desire for a life without any local desire fulfilment (i.e. a global desire for a life without anything of value), and we should have to say that their lives are valuable if they have fulfilled this global desire for a life without any value. That seems to be an absurd conclusion, and, thus, the global version of the unrestricted desire theory does not appear to be a very promising alternative (I should like to thank Derek Parfit for detailed comments on this issue).

<sup>38</sup> See also Sen (1987b), p. 9-12.

<sup>39</sup> See Tungodden (1994a) for a further discussion of this idea.

- if a person desires something that is disvaluable, then the fulfilment of this desire does not bring about anything valuable in his life (on the contrary, it only brings about the disvaluable object that the person desires). But it does not seem straightforward to apply this argument to example D. It would not be unreasonable to claim that the life as a drug addict is less bad if one always has sufficient supply of drugs than if one sometimes lacks the desired drug (of course, we neglect the possibility of becoming 'clean' if the supply of drugs is cut). Alternatively, we may argue that desire fulfilment should be considered as valuable in every situation, and claim that cases of the kind discussed in example D only illustrate situations where the valuable object of desire fulfilment is outweighed by the presence of a disvaluable object. But neither is this suggestion indisputable; it may seem implausible to claim that anything of value is obtained when someone for example obtains the fulfilment of an antisocial desire ("It was valuable that he had his desire for killing his neighbour fulfilled, even though it undoubtedly is disvaluable to be a murderer").

However, I shall in the following disregard these extremely difficult cases, and, on the whole, view desire fulfilment as a valuable object. Moreover, I shall also assume that desire fulfilment is necessary to extract the value potential present in other relevant objects. There are, of course, a number of objects that may be of interest in this context; whether I am in good health, a person with self-respect, a part in the life of the community, and so on. These objects, that characterise what the person is able to do and be in the various states of affairs, are conventionally considered to be valuable, and the presence or absence of them is usually taken into account in an overall consideration of the situation (together with the extent of desire fulfilment in the various alternatives). Sen has characterised these various objects as functionings, and he claims that "functionings are *constitutive* of a person's being, and an evaluation of well-being has to take the form of an assessment of these constituent elements".<sup>40</sup> In the light of our discussion, that appears to be a reasonable claim, and I shall apply the framework of Sen in the rest of the discussion.

The approach of Sen may indicate a reasonable representation of the concept of well-being, but it leaves unanswered some difficult questions. Certain valuable and

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<sup>40</sup> Sen (1992), p. 39. The freedom aspect is also an important part of the framework suggested by Sen, and it is characterised by the concept of a capability set. See Sen (1987b,1993c) for a discussion of this issue.

disvaluable functionings have already been suggested, but how are we to identify and determine the overall set of functionings that belongs to the realm of values? Moreover, what are the relative weights that we ought to give them in the evaluation of various alternatives? The first question, though, may turn out to be less problematic in practice than it appears to be at a metaphysical level; it is not implausible to assume that we to a great extent are able to acquire an understanding of the content of the realm of value by practical reasoning.<sup>41</sup> This is the project of Aristotle, who aimed at an objective account of the human good, and the continued relevance of this line of reasoning has been underlined by (among others) Nussbaum: "The rejection of the idea of ethical truth as correspondence to an altogether uninterpreted reality does not imply that the whole idea of searching for the truth is an old-fashioned error. Certain ways in which [we] see the world [may] still be criticized exactly as Aristotle criticized them: as stupid, pernicious, and false. The standards used in such criticism must come from inside human life...And the inquirer must attempt, prior to criticism, to develop an inclusive understanding of the conceptual scheme being criticized, seeing what motivates each of its parts and how they hang together".<sup>42</sup> By linking the realm of values to practical reasoning, though, we do leave the sphere of positivism. But that is - as should now be evident from the discussion in section 2 - not a particular problem for this type of questions. However, this fact should make us humble in a discussion of the realm of values, because the possibility for testing our understanding of value issues rests on our willingness to reflect openly on the arguments of our opponents.

It seems to me, though, that there is more or less consensus in society with regard to a classification of valuable and disvaluable functionings. Obviously, the consensus does not have to imply that the general opinion on this issue is reasonable, but it may indicate that people perceive the problem of weighting as the source of the hard choices in their lives.<sup>43</sup> Recall the problem of choosing a career. If we have complete information about the life as a forester and the life as a lawyer, then my claim is that we do not find it too difficult to identify the valuable and disvaluable functionings in the various alternatives.<sup>44</sup> Hence, we may describe the problem as a choice between

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<sup>41</sup> See Taylor (1993).

<sup>42</sup> Nussbaum (1993), p. 260-261. See also Goodin (1986).

<sup>43</sup> On this issue, see also Sen (1992), p. 46-49, and Sugden (1993), p. 1953.

<sup>44</sup> Once again, we may, of course, make mistakes in this process of classification, but that is not an important issue for the present argument.

two vectors which characterise the valuable and disvaluable functionings (as we see them) in the respective alternatives. The problem is then how to weight the various elements in each vector in order to reach an overall judgement. Of course, if one alternative completely dominates the other alternative, i.e. it has more of every valuable functioning and less of every disvaluable functioning, then we face a trivial choice. But that is usually not the case in the choice of career (and many other important situations), and, thereby, we may run into a difficulty.

This difficulty may reflect the structure of the realm of values, and that is what Sen calls the 'fundamental reason for incompleteness'.<sup>45</sup> A fundamental reason for incompleteness reflects that there in general is no 'best' scheme of relative weights between the various valuable and disvaluable functionings. In other words, there is no single recipe for a good life. That is not to say that it is impossible to acquire a ranking in every non-trivial case, but rather that in many situations there is a range of reasonable weights that may be applied. Two arguments may indicate that a fundamental reason for incompleteness is present in the realm of values; we may call them 'the problem of space' and 'the problem of compatibility'.<sup>46</sup> The problem of compatibility has been illuminatingly discussed by Berlin (though in a somewhat different context): "Some among the Great Goods cannot live together. That is a conceptual truth. We are doomed to choose, and every choice may entail an irreparable loss".<sup>47</sup> The problem of space indicates the possibility that life may not contain enough space to incorporate all of the Great Goods that in fact are compatible. Both problems appear to me to be rather obvious on due reflection, though, admittedly, their relevance may depend on the level of abstraction applied in debating the content of the realm of values.<sup>48</sup> However, for our purpose, I find it appropriate to neglect the possibility for further abstraction, and, thus, I shall in the following discussion pursue the line of reasoning that presupposes the presence of incompleteness in the concept of well-being.

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<sup>45</sup> Sen (1992). Sen adds: "The 'pragmatic reason for incompleteness' is to use whatever parts of the ranking we manage to sort out unambiguously, rather than maintaining complete silence until everything has been sorted out and the world shines in dazzling clarity" (p. 49).

<sup>46</sup> Similar problems have also been discussed in a somewhat different context by Nagel (1979) and Berlin (1991).

<sup>47</sup> Berlin (1991), p. 13.

<sup>48</sup> See also Tungodden (1994b).

As argued by Berlin, the presence of incompleteness in the concept of well-being may cause many hard choices for each of us, and, hence, it is important to bear in mind the reason for these hard choices. We do not necessarily make a mistake if we make a choice that involves an irreparable loss in one dimension of our well-being (if at the same time we acquire something of value), it may simply reflect an inevitable consequence of the underlying structure of the realm of values. This structural aspect should also be captured by the framework that we apply as representation of the concept of well-being, and, in this respect, the framework of functionings is a promising candidate. It does not provide us with a one-dimensional delineation of the consequences of the various alternatives that we face, but rather underlines the extensive incompleteness that seems to be present in the concept of well-being. This setting has important consequences for the question about interpersonal comparisons of well-being as well, and I now turn to a discussion of this issue.

#### **4. Interpersonal Comparisons of Well-Being**

We sometimes want to make judgements about other people's well-being, and, in this section, I shall debate the possibility of doing interpersonal comparisons of well-being. This is an extremely important issue, because if interpersonal comparisons of well-being do not make any sense, then important institutions (such as the welfare state and agencies of international redistribution) may lack a reasonable foundation. Yet, many people have perceived an elaboration of this issue as idle, though for very different reasons. Some people claim that the level of income is a satisfactory indicator of the well-being of a person; others endorse the claim of Robbins that there is no meaningful way of making such comparisons.<sup>49</sup>

The problems of the income indicator are rather evident, and, therefore, I shall focus on the relevance of the claim of Robbins. Robbins perceived interpersonal comparisons of well-being as meaningless inasmuch as it is impossible to see inside other people's heads.<sup>50</sup> And surely, the impossibility of observing the mental states of people complicates the task of making interpersonal comparisons of well-being. However, it seems to me to be outlandish to claim that this fact completely erases the

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<sup>49</sup> See Sen (1982, 1987b) and Cooter and Rappoport (1984).

<sup>50</sup> "Introspection does not enable *A* to measure what is going on in *B*'s mind, nor *B* to measure what is going on in *A*'s" (Robbins (1935); quoted in Sen (1982), p. 265).

relevance of such comparisons, because (as has been stressed in section 3) mental states are not at all the only objects of value in people's lives. There is a vector of functionings that characterise the well-being of any person, and the mental state of a person is only one element in this vector. Thus, it is hard to see that the difficulty of observing one element (even though it is an important one) should make it impossible to say anything meaningful about a concept that is characterised by a vector of functionings.<sup>51</sup>

If that were the case, then it implies that none of us would be able to make any meaningful comparisons of changes in our own level of well-being.<sup>52</sup> If we believe that it is valuable to have good friends as such (and not only acquaintances that pretend that they are friends, and then behind our back make cheap jokes about our behaviour), then we cannot verify whether a valuable functioning is present in our lives unless we are able to see inside the heads of the people we perceive to be our friends. Equivalently, if we view it as valuable to have a job that other people perceive as meaningful, or to be part of a society where people enjoy a reasonable level of well-being, or to have a mate and kids that really love you, and so on. In every case, we are caught in a dilemma, because we are unable to measure what is going on in other people's minds. But consider the following two cases:

**Example E:** A good friend visits you and your mate. She tells you that her well-being has improved the last year. Your mate is delighted about such good news. You, on the other hand, burst out: "My naïve friend, what are you talking about, you cannot make any meaningful evaluation of the change in your level of well-being"?

**Example F:** A good friend visits you and your mate. She tells you that she has donated some money to the victims of the civil war in Rwanda. Your mate is proud of the friend's noble act. You, on the other hand, burst out: "My naïve friend, why are you doing that, you cannot make any meaningful comparison of your level of well-being and the level of well-being of the victims of the civil war in Rwanda"?

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<sup>51</sup> In this discussion, though, we should keep in mind that mental states have both instrumental and intrinsic importance; desire fulfilment is a valuable object in itself, and, moreover, the intensity of people's desires influences the amount of value extracted from various situations.

<sup>52</sup> This may be the case - as indicated in the discussion of Example C in section 3 - and a further statement on this issue demands a clarification of the content of the concept of well-being. That is the purpose of this section, where I aim to validate the possibility of doing both intrapersonal and interpersonal comparisons of well-being within the setting of functionings.

The visitor (in both examples) may, of course, acknowledge an interest in your arguments (to wit the arguments of Robbins), but I doubt that these arguments will convince her about her initial evaluation necessarily being meaningless. She may insist that her intention was to make a reasonable position dependent statement about a part of reality where nature does not permit anything else than this type of positional objectivity; and in the following I shall provide arguments that support her claim.<sup>53</sup> (She may further insist that there is no part of reality which makes possible a position independent observation, but that is an issue which it is beyond the scope of this essay to debate.)

A position dependent statement about changes in our own level of well-being has to be founded on observations that we are able to make from our position about the presence and absence of valuable and disvaluable functionings in our life. The fact that we are unable to make anything but incomplete observations (from our position) of the vector of functionings that is relevant for the evaluation, explains why our statements cannot express anything else than positional objectivity on this issue. People who are in a different position - that may, for example, be our (so-called) friends - may make a different observation from their position (because they know about the cheap talk behind my back). But still the nature of our statements does not make them meaningless. They are not at all unfounded, but derived from observations of a large number of the objects which are of vital importance for our well-being. (Moreover, they are the kind of statements about our own level of well-being that it is possible to acquire from our position in the system - and they would have been replicated by anyone who entered into this position.)

But if we should consider this type of intrapersonal comparison of well-being as meaningful, then may we still insist on interpersonal comparisons of well-being being meaningless? We are able to observe the presence and absence of many of the valuable and disvaluable functionings in any person's life, and, thus, neither in cases of this kind will our statement be unfounded. Some readers may object, and claim that the problem of being unable to see inside the head of the person whose well-being we attempt to evaluate is far more severe than the corresponding problem present in the kind of intrapersonal comparison of well-being discussed above. That is undoubtedly

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<sup>53</sup> On a more comprehensive discussion of positional objectivity, see Sen (1993b). See also Putnam (1993) and Scanlon (1991).



a fair objection, but it does not completely destroy the possibility of making reasonable interpersonal comparisons of well-being. First, it is possible for us to make a sensible assessment of the mental experiences of, for example, the victims of the civil war of Rwanda. We understand that they experience an immense amount of sorrow and pain in their lives, and, moreover, that the absence of desire fulfilment is overwhelming in almost every dimension. We are (of course) unable to feel their pain and sorrow in the same way that they feel it, but we are still able to make a sensible judgement about their feelings in the present situation.<sup>54</sup> Second, we are able to observe a number of other relevant functionings, and, thus, our statements on this issue are not at all utterly unfounded.

I shall close this section by briefly commenting on a debate in recent social choice theory that is influenced by the issue of interpersonal comparisons of well-being.<sup>55</sup> A conventional strategy in this literature has been to explore the link between informational bases and social choice criteria by assuming that the same type of interpersonal comparisons of well-being is possible throughout the society. Hence, if you find it reasonable to state that you enjoy a higher level of well-being than the victims of the civil war in Rwanda, then it is assumed (within this line of reasoning) that you also can make a reasonable statement about whether you enjoy a higher or lower level of well-being than your neighbour next door. But why should you? The positional statements that we are able to acquire on interpersonal comparisons of well-being in an affluent society may be rather dubious, because the differences in the vector of functionings may often be related to differences in functionings that are not observable (and, hence, difficult to assess). However, that is not the case in comparisons between the victims of the civil war of Rwanda and citizens of an affluent society, and, thus, there is an important structural component in the informational base of interpersonal comparisons of well-being that has been overlooked in the literature on social choice theory. The fundamental reason of incompleteness adds another complication to this picture, but it is beyond the scope of this essay to elaborate on the consequences of such a substantial change in the informational structure of social choice theory.<sup>56</sup>

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<sup>54</sup> See also Roy (1989), p. 178-179.

<sup>55</sup> d'Aspremont (1985) and Hammond (1991) provide surveys on this literature.

<sup>56</sup> Offhand, though, it seems plausible to claim that these changes may strengthen the relevance of social criteria that focus on the conditions of the least advantaged segment in society. See also Tungodden (1994c).

## **5. Final Remarks**

The theory of revealed preference claims that a person's preference structure can be 'revealed' by observing this person's behaviour. At the same time, the ordinalists claim that we cannot 'reveal' anything meaningful about a person's well-being by observing the life of that person. Surprisingly, many economists have chosen to work within a framework where both these claims are accepted. I have argued in this essay, though, that we have to modify both claims. We ought to consider the requirements of consistency and completeness in rational choice theory as axioms, and not as hypotheses that may be tested, and the reasonableness of these axioms depends (at least partly) on which ethical framework people find plausible. (The foundation of rational choice theory is, for example, inappropriate, in many situations, in societies where ethical nihilism is the dominant view.) On the other hand, I have argued that we can - based on position dependent observations - attain a reasonable foundation for interpersonal comparisons of well-being (if we accept the structure of the realm of values discussed in the second part of section 3), though the seeming presence of incompleteness in the concept of well-being should make us humble with respect to this task in certain situations.

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# 4

## The Distribution Problem and Rawlsian Reasoning<sup>1</sup>

### 1. Introduction

Social choice theory is concerned with the problem about how to choose in situations where there are conflicting interests. That may be with respect to what book someone ought to read (if other members of society also take a position on this issue) or with respect to what basic institutions that ought to be established in a society.<sup>2</sup> Two important problems have to be dealt with in an overall discussion of these issues. First, how are we to separate choices that belong to the personal domain and choices which others legitimately can claim an interest in, and, second, how are we to measure and compare various people's interests in the relevant situations?

The discussion in this essay concerns the second problem with respect to one particular social choice; to wit about how to evaluate various income distributions in a society. Two approaches to this particular issue have dominated the literature on political philosophy, and the distinction between them is closely connected to the first-mentioned problem of social choice theory. On the one hand, we may argue that the issue of income distribution is solely about respecting people's rights with respect to the acquisition and transfer of resources: "What each person gets, he gets from others who give to him in exchange for something, or as a gift. In a free society, diverse persons control different resources, and new holdings arise out of the voluntary exchange and action of persons. There is no more a distributing or distribution of shares than there is a distributing of mates in a society in which persons choose whom they shall marry. The total result is the product of many

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<sup>2</sup> The classical references on this subject are Harsanyi (1955), Arrow (1963), Sen (1970), and Rawls (1971).

individual decisions which the different individuals involved are entitled to make".<sup>3</sup> This view is neglected in the coming discussion.

On the other hand, it can be argued that the society should be considered as a system of cooperation, where the distribution of income ought to be regulated by the basic institutions of society.<sup>4</sup> If we take up this position - as I do in this essay - then we need to specify a choice rule that can guide the basic institutions in the choice among various feasible income distributions; a choice rule that can amalgamate people's interests on this issue in a reasonable way. That is the subject at issue in this essay. More precisely, I elaborate on one particular choice rule suggested by Rawls - the maximin rule - which together with the classical utilitarian rule constitute the two dominant views within this framework. The principal argument in the essay is that the maximin rule has been wrongly translated in the formal literature on welfare economics and social choice theory, which has contributed to a misplaced debate about the appropriateness of this criterion. In section 2, I provide some further motivation for the discussion. In section 3-4, I present the formal analysis, and in section 5-6, I comment on the results.

## 2. Motivation

The Rawlsian framework provides an illuminating approach to social choices. Rawls claims that we ought to solve the conflicts in social choices by entering into a primordial position of equality - the original position - and behind an imaginary veil of ignorance choose as if we are ignorant about our own position in society.<sup>5</sup> And it is from this construction that Rawls justifies the two principles of justice as the foundation for the choice of basic institutions in society. Rawls makes two important claims with respect to the distribution of income. First, he claims that people's level of income constitutes a reasonable foundation for ordinal interpersonal comparison of well-being.<sup>6</sup> The underlying idea of this claim is that income is needed in order to

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<sup>3</sup> Nozick (1974), p. 149-150.

<sup>4</sup> See Rawls (1993), p. 15-22.

<sup>5</sup> Harsanyi (1955) presents a similar idea, but there are some fundamental differences between the framework of Harsanyi and the Rawlsian framework. It is beyond the scope of this paper to elaborate on these differences, but see Tungodden (1994a).

<sup>6</sup> Rawls often uses the more comprehensive notion of primary goods (which in addition to income includes wealth, rights and liberties, powers, and opportunities) in his discussions, but this broader approach easily involves the problem of indexing. To escape this problem, Rawls assumes that these

pursue whatever people perceive as a good life. This view is accepted a priori in the following discussion.<sup>7</sup> Second, Rawls claims - in the second principle of justice - that behind a veil of ignorance people would choose basic institutions that bring about the income distribution that favours the least advantaged in society. The interpretation of this claim is the issue of interest in this essay.

The second principle of justice has been interpreted as saying that the preferred income distribution ought to be the one that yields the highest level of well-being to the worst-off person in society; and in choices between income distributions that assign the same amount of well-being to the worst-off person we ought to prefer the income distribution that assigns most well-being to the second worst-off person (and so on). This interpretation of the second principle of justice is labelled the *leximin rule*.<sup>8</sup> However, as should be well-known, the leximin rule does not convey the intention behind the reasoning of Rawls.<sup>9</sup> Rawls is concerned about the well-being of the least advantaged segment in society (and not only the well-being of the least advantaged person): "In any case we are to aggregate to some degree over the expectations of the worst off...[The persons in the original position] interpret [the second principle of justice] from the first as a limited aggregative principle and assess it as such in comparison with other standards. It is not as if they agreed to think of the least advantaged as literally the worst off individual..."<sup>10</sup>

Thus, Rawls' claim is that we behind a veil of ignorance would allow a trade-off between gains and losses of people that belong to the least advantaged segment in society, but neglect changes in the conditions of the better-off group (as far as the

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other primary goods are sufficiently correlated with income (see Rawls (1971), p. 97). Thus, our concentration on the distribution of income is justifiable. The focus on income (and primary goods in general), though, is controversial if people differ in their ability to convert income into something of intrinsic importance; see Sen (1973,1992).

<sup>7</sup> Once again, see Sen (1992), p. 85-87 for a discussion of the problem of "inter-end variation" in the Rawlsian framework. See also Tungodden (1994b)

<sup>8</sup> See Sen (1970), p. 138, and Sen (1974).

<sup>9</sup> At least not the view expressed by Rawls (1971, 1993). But see Rawls (1963) for a position closer to the intuition in the leximin principle.

<sup>10</sup> Rawls (1971), p. 98. However, Rawls is somewhat flimsy in his reasoning on this issue. In the discussion of a two-person society, Rawls argues that "[a]lso, nothing is lost if an accurate interpersonal comparison of benefits is impossible. It suffices that the least favoured person can be identified and his rational preferences determined" (Rawls (1971), p. 77). Thus, in this example, Rawls stresses that the maximin rule only requires ordinal interpersonal comparability of well-being; and that has been used as a defence for the interpretation of the maximin rule as being solely concerned with the least favoured person (see for example d'Aspremont (1985), p. 55).



members of the least advantaged segment are not indifferent between various income distributions). We may label this the *leximingroup rule*. The most obvious difference from the leximin rule is that a leximingroup rule would demand the possibility of making interpersonal comparisons of well-being gains and losses between the members of the least advantaged segment. Hence, the invariance class with respect to people's well-being functions needs to be extended. However, the leximingroup rule can still be less demanding in this respect than the utilitarian rule (which demands the possibility of comparing well-being gains and losses throughout the entire population), so that this aspect should not make us reject this interpretation of the second principle of justice. A more substantial issue, though, is how to define the least advantaged segment in society. Rawls made various suggestions on this issue, and in the next sections I discuss these and some other possibilities. It turns out that for many of these definitions of the least advantaged segment (as those suggested by Rawls), we in fact end up - if we accept some other reasonable axioms - by endorsing the leximin rule. However, genuine alternatives to the leximin rule do exist, and I elaborate on them at the end of section 4.

### 3. Preliminaries

Define a finite set of individuals  $N = \{1, 2, \dots, i, j, k, \dots, n\}$ . The problem is to find a consistent choice rule that ranks all income vectors  $Y^I = \{y_1^I, \dots, y_i^I, \dots, y_n^I\}$ ,  $\forall I$ , where  $y_i^I \geq 0$ ,  $\forall i$ . At the outset of the analysis, I assume that people are unconcerned with respect to the income level of the rest of the population in society. This assumption is captured by the following axiom:

#### AXIOM NEPA (No-Envy-Or-Pity Axiom):

For any pair of income vectors  $Y^A, Y^B$ :  $[y_i^A > y_i^B \rightarrow Y^A P^i Y^B \quad \& \quad y_i^A = y_i^B \rightarrow Y^A I^i Y^B]$ ,  $\forall i$ .

$P$  and  $I$  are the binary relations of respectively 'better than' and 'indifferent to' (where the superscript  $i$  indicates that this is with respect to the ordering of individual  $i$ ; the absence of a superscript will in the coming discussion indicate the ordering of the social choice rule). In section 5, I discuss somewhat further some plausible substitutes

for Axiom NEPA, and the rest of the axioms in this section is therefore formulated in such way that they may cover the coming extensions as well (by including the overall income vector as the argument in people's well-being functions).

I assume that the well-being functions of people allow full cardinal comparability, i.e. that they are defined up to a common positive affine transformation.<sup>11</sup>

**Axiom CFC (The Cardinal Full Comparability Axiom):**

*For all  $i, I$ :  $\overline{W}_i(Y^I) = \alpha + \beta W_i(Y^I)$ ,  $\beta > 0$ .*

$\alpha$  and  $\beta$  are constants, and  $\overline{W}_i(Y^I)$  denotes  $i$ 's transformed well-being function. I shall elaborate somewhat on the choice of Axiom CFC in section 5, but it seems to me to be a rational point of departure. Unit comparability of well-being is needed in order to implement the classical utilitarian choice rule - the most substantial opponent to the Rawlsian framework - and, thus, the classical utilitarian rule cannot be preferred to the leximigroup rule advanced in this essay on the basis of this part of the invariance requirement. However, Axiom CFC imposes level comparability of well-being as well, and in this respect a leximigroup rule is more demanding than the classical utilitarian rule. But this is also the case for the leximin rule, and hence the analysis in this essay does not presume a more demanding framework for interpersonal comparability of well-being levels than what is conventionally the case when discussing the Rawlsian framework.

Finally, I incorporate the assumption of Rawls on the link between well-being and income. This axiom is important in the following discussion, because it makes feasible several interesting definitions of the least advantaged segment.

**Axiom MWA (The Monotonicity Welfare Axiom):**

*For all  $i, j, I$ :  $[y_i^I > y_j^I \rightarrow W_i(Y^I) > W_j(Y^I)]$  &  $[y_i^I = y_j^I \rightarrow W_i(Y^I) = W_j(Y^I)]$ .*

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<sup>11</sup> However, only ordinal interpersonal comparability is needed in most of the discussion in the sections 4 and 5.

Certain restrictions on a social choice rule are conventionally considered as indisputable, and they are accepted without any further discussion in this essay. The binary relation of 'at least as good as' is denoted  $R$  in the further discussion.

**Axiom SP (The Strong Pareto Axiom):**

*For any pair of income vectors  $Y^A, Y^B$ :  $[W_i(Y^A) \geq W_i(Y^B), \forall i] \rightarrow Y^A R Y^B$ . In addition, for some  $j \in N$ :  $[W_j(Y^A) > W_j(Y^B)] \rightarrow Y^A P Y^B$ .*

**Axiom A (The Anonymity Axiom):**

*If  $Y^A$  is a reordering of the income vector  $Y^B$ , then  $Y^A I Y^B$ .*

**Axiom T (The Transitivity Axiom):**

*For any triplet of income vectors  $Y^A, Y^B, Y^C$ :  $[Y^A R Y^B \ \& \ Y^B R Y^C] \rightarrow Y^A R Y^C$ .*

Let  $Y^{I'}$  denote the ordered version of the income vector  $Y^I$ , i.e. the income vector obtained from a reordering of  $Y^I$  such that  $y_1^{I'} \leq y_2^{I'} \leq \dots \leq y_n^{I'}$ . It follows from Axiom A that  $Y^{I'} I Y^I$ . Hence, in the rest of the essay we can narrow the discussion to the ordered versions of income vectors, and, thus, assume that the same person obtains the same position in every income vector under consideration (i.e. person  $i$  always obtains position  $i$  in the income distribution).

#### 4. Analysis

In this section, I discuss social choice rules that may represent the idea of Rawlsian reasoning more convincingly than the leximin rule. The leximin interpretation of the second principle of justice can be stated formally as follows:<sup>12</sup>

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<sup>12</sup> See Sen (1982), p. 234.

**Axiom LM (The Leximin Axiom):**

For any pair of income vectors  $Y^A, Y^B$ :  $[\exists j \in N: W_j(Y^A) > W_j(Y^B)$   
&  $W_i(Y^A) = W_i(Y^B), \forall i < j] \rightarrow Y^A P Y^B$ . On the other hand,  
 $[W_i(Y^A) = W_i(Y^B), \forall i] \rightarrow Y^A I Y^B$ .

Axiom LM appoints the worst-off person to dictator in every possible situation; even in situations where the interests of everyone else in the population are in conflict with the interests of the worst-off person. A seemingly more moderate axiom has been suggested by Hammond:<sup>13</sup>

**Axiom HE (Hammond's Equity Axiom):**

For any pair of income vectors  $Y^A, Y^B$ :  
 $[\exists j, k \in N: W_j(Y^B) < W_j(Y^A) < W_k(Y^A) < W_k(Y^B)$  &  $W_i(Y^A) = W_i(Y^B), \forall i \neq j, k]$   
 $\rightarrow Y^A R Y^B$ .

The idea of Axiom HE is to narrow the dictatorial power to the worse off person to cases where only two persons are concerned about the choice between two income vectors. In these situations, Axiom HE does not pay consideration to the losses or gains of the better off person, but assigns the worse off person to dictator. Thus, if we, by way of illustration, consider the income vectors  $Y^A = \{20, 40, 60, 80, 100\}$  and  $Y^B = \{20, 39, 80, 80, 100\}$ , then, it is easily seen that Axiom HE and Axiom NEPA together imply that  $Y^A R Y^B$ . However, if we introduce the income vector  $Y^C = \{0, 50, 50, 60, 1000\}$  as well, then, Axiom HE and Axiom NEPA are unable to rank between either  $Y^A$  and  $Y^C$  or  $Y^B$  and  $Y^C$ . This incompleteness derives from the fact that Axiom HE does not state a position on cases where the interests of more than two people are involved. It leaves unanswered the question about whether the interests of the worst-off person sometimes ought to be trumped in these situations. Axiom LM, however, appoints the worst-off person to dictator in every possible case, and, thus, from Axiom LM and Axiom NEPA it follows that  $Y^A P Y^C$  and  $Y^B P Y^C$ .

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<sup>13</sup> See Hammond (1976a). Hammond is concerned with the ranking of the set of potentially feasible social states (and not solely the issue of income distribution), but his overall conclusion coincides with the results reported in Theorem 1.

The distinction between these two axioms, though, is illusory, which is rather obvious if we keep in mind that the better off person in Axiom HE is unable to trump the worse off person even if his or her gain is enormous and the loss of the worse off person insignificant. If we accept such a view (as we do if we endorse Axiom HE), then how can we possibly claim that the interests of the worst-off person sometimes ought to be trumped if the interests of more than two people are involved (which is the position we take up if we reject Axiom LM)? The fact that the interests of more than one person are at stake (in addition to the interests of the worst-off person) can hardly make any substantial difference. In the two-person case, we may increase the gains or the losses of the better off person as much as we dare without being able to overrule the interests of the worse off person according to Axiom HE, and, thus, it seems plausible to assume that this normative position also embraces the claim that the interests of the worse off person should trump the gains or the losses present in many-person cases.<sup>14</sup>

The following theorem states the relationship between Axiom LM and Axiom HE more formally.

**Theorem 1:** *LM is the only choice rule that satisfies NEPA, MWA, CFC, A, SP, T, and HE.*

*Proof.* Suppose that  $\exists Y^A, Y^B: y_1^A < y_1^B$  &  $Y^A P Y^B$ . Then it follows from Axiom NEPA and Axiom SP that  $\exists i \in N - \{1\}, y_i^A > y_i^B$ . The theorem is now proved by establishing a contradiction.

Step (1): Define  $S^B = \{i \in N | y_i^A > y_i^B\}$ . As noticed above,  $S^B \neq \emptyset$ , and  $S^B \subset N$  by assumption, because  $y_1^A < y_1^B$ . Hence, if  $M$  is the number of elements in  $S^B$ , then  $0 < M \leq (N - 1)$ . Define  $Y^{B-1}$  such that:  $[(Y^B \cup Y^{B-1}) - (Y^B \cap Y^{B-1}) = \{y_j^B, y_j^{B-1}, y_1^B, y_1^{B-1}\}$  &  $y_j^{B-1} = y_j^A, \exists j \in S^B$  &  $y_1^{B-1} = y_1^B - \frac{\psi}{M}(y_1^B - y_1^A), 0 < \psi < 1]$ . It follows from Axiom NEPA and Axiom HE that  $Y^B R Y^{B-1}$ .

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<sup>14</sup> Of course, some readers may argue that there is a limitation on the size of the feasible gains and losses that one person may experience, and that this may explain an important difference in Axiom HE and Axiom LM. I presume that this is the argument underlying the discussion in Sen (1976,1977) on this issue, but I shall not pursue this line of reasoning in the following.

Step (2):  $M \neq 1 \rightarrow$  Define  $S^{B-1} = \{i \in N | y_i^A > y_i^{B-1}\}$ . Define  $Y^{B-2}$  such that:  $[(Y^{B-1} \cup Y^{B-2}) - (Y^{B-1} \cap Y^{B-2}) = \{y_j^{B-1}, y_j^{B-2}, y_1^{B-1}, y_1^{B-2}\}, y_j^{B-2} = y_j^A, \exists j \in S^{B-1}$  &  $y_1^{B-2} = y_1^{B-1} - \frac{\psi}{M}(y_1^B - y_1^A)]$ . It follows from Axiom NEPA and Axiom HE that  $Y^{B-1}RY^{B-2}$ . Moreover, it follows from Axiom T that  $Y^BRY^{B-2}$ . Repeat this step  $M$  times. It is then easily seen that it follows from Axiom NEPA, Axiom HE, and Axiom T that  $Y^BRY^{B-M}$ .

Step (3): Define  $Y^{\bar{A}}$  such that:  $[(Y^A \cup Y^{\bar{A}}) - (Y^A \cap Y^{\bar{A}}) = \{y_1^A, y_1^{\bar{A}}\}$  &  $y_1^A < y_1^{\bar{A}} < y_1^{B-M}]$ . It follows from Axiom NEPA and Axiom SP that  $Y^{\bar{A}}PY^A$ . Moreover, because  $S^{B-M} = \emptyset$ , it follows from Axiom NEPA and Axiom SP that  $Y^{B-M}PY^{\bar{A}}$ .

Step (4): The required contradiction is now established by noticing that  $Y^APY^B$  (by hypothesis) &  $Y^BRY^{B-M}$  (from step (2)) &  $Y^{\bar{A}}PY^A$  (from step (3)) implies  $Y^{\bar{A}}RY^{B-M}$ , which is contradicted in step (3) (where it follows from Axiom NEPA and Axiom SP that  $Y^{B-M}PY^{\bar{A}}$ ).

Step (5): The proof is completed by repeating step (1) - (4) for some pair of income vectors  $Y^A, Y^B$ , where  $y_1^A = y_1^B$  &  $y_2^A = y_2^B$  & ... &  $y_k^A = y_k^B$  &  $y_{k+1}^A < y_{k+1}^B, k < n$ , and then using the induction hypothesis.

The underlying intuition of the proof is rather straightforward. The fact that the worst-off person in  $Y^B$  is better off than the worst-off person in  $Y^A$  makes it possible to construct a sequence of steps where a number of insignificant decreases in the income of the worst-off person in  $Y^B$  (without making this person worse off than the worst off person in  $Y^A$ ) knocks out the increase in income of those who are worse off in  $Y^B$  than in  $Y^A$  (independent of the size of the income increase). Hence, the new income vector ought to be considered as worse than  $Y^B$  according to Axiom HE, but better than  $Y^A$  according to Axiom SP (because everyone in the new income vector has at least as much income as in  $Y^A$ , and the worst-off person has more). Therefore, if we endorse Axiom HE, then  $Y^B$  cannot be considered as worse than  $Y^A$  if the

worst-off person is better off in  $Y^B$  than in  $Y^A$ . Consequently, we also have to endorse Axiom LM.<sup>15</sup>

The problem of Axiom HE and Axiom LM, though, is that they do not take into consideration whether the persons concerned about the ranking between two income vectors belong to the least advantaged segment or not. Rawls, on the other hand, stresses the importance of this aspect. He claims that we ought to accept some aggregation of interests among the members of the least advantaged segment, but rejects any trade-off between the interests of the members of the least advantaged segment and the interests of the members of the better off group. In order to establish a more precise formulation of this criterion, a formal definition of the least advantaged segment is needed. In the rest of this section, I pursue a solution to this problem.

Define  $P^I = \{1, \dots, i, j, k, \dots, p\}$ ,  $0 \leq p \leq n$  as the set of people who constitute the least advantaged segment in a society with income distribution  $Y^I$ , and let  $R^I$  denote the better off group in society  $I$  (where  $P^I \cup R^I = N$ ,  $\forall I$ ). (In the coming discussion, the reader should have in mind that we are indifferent between income vectors where the same person obtains the same position in every income vector under consideration. As verified in section 3, this follows from Axiom A.) The following axiom, then, appears to capture an important part of Rawlsian reasoning.

**Axiom REA (The Rawlsian Equity Axiom):**

*For any pair of income vectors  $Y^A, Y^B$ : [ $\exists j \in P^A \cap P^B$ :  $W_j(Y^A) > W_j(Y^B)$  &  $W_i(Y^A) \geq W_i(Y^B)$ ,  $\forall i \neq j \in P^A \cup P^B$ ]  $\rightarrow Y^A P Y^B$ .*

Axiom REA claims that the gains and losses of the members of the better off group should be ignored if someone in the least advantaged segment is concerned about the choice between two income vectors. Thus, a member of the least advantaged segment is appointed to dictator if everyone else in the least advantaged segment is indifferent

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<sup>15</sup> The following income vectors may serve as an illustration of the sequence of the proof:  
 $Y^A = \{9, 90, 90, 90\}$ ,  $Y^B = \{20, 40, 60, 80\}$ ,  $Y^{B-1} = \{17, 40, 60, 90\}$ ,  
 $Y^{B-2} = \{14, 40, 90, 90\}$ ,  $Y^{B-3} = \{11, 90, 90, 90\}$ , and  $Y^{\bar{A}} = \{10, 90, 90, 90\}$ .

between the income vectors in question. However, Axiom REA does not in general appoint the worst-off person to dictator, because it does not exclude the possibility of a trade-off between the gains or losses of the worst-off person and other members of the least advantaged segment.

**Theorem 2:** *LM satisfies NEPA, MWA, CFC, A, SP, T, and REA.*

*Proof.* The theorem is easily verified by checking the definition of the leximin rule. If the leximin rule did not satisfy Axiom REA, then, in some cases the leximin rule overruled the interests of a member of the least advantaged segment in order to satisfy the interests of one or several members of the better off group. But if that were the case, then, the member of the least advantaged segment is better off than the members of the better off group, because the leximin rule always appoints the worst off person to dictator. The required contradiction should thus be obvious.

Of course, the leximin rule can easily be excluded as a reasonable normative position by imposing another axiom which rejects the dictatorship of the worst-off person. But be that as it may for the moment. A more interesting issue is whether there are any additional choice rules that satisfy Axiom REA (and the other axioms imposed on the choice rule in Theorem 2). In order to answer this question, though, we ought to come up with a more explicit definition of the least advantaged segment. Various possibilities exist, but the approach that probably strikes people as most appealing is to connect the definition of the least advantaged segment to the average income in society.

**Definition LTAD (Less-Than-Average-Definition):**

$$\text{For any } I: P^I = \left\{ i \in N \mid y_i^I < \frac{1}{n} \sum_{i=1}^n y_i^I \right\}.$$

Definition LTAD has an intuitively egalitarian interpretation if we take into account Axiom MWA; it defines the least advantaged segment as the group of people who enjoy a lower level of well-being than what it is possible for everyone in a society to enjoy if the same amount of income is equally distributed. Hence, Axiom REA



interpreted in the context of Definition LTAD states that when we consider two income vectors, then we should assign lexicographic priority to the improvement of the well-being of those who receive less than the average amount of income. And the Rawlsian intuition conveyed by this version of Axiom REA is straightforwardly seen from the following example: Consider the income vectors  $Y^A = \{10, 10, 90, 100\}$ ,  $Y^B = \{5, 8, 190, 200\}$ ,  $Y^C = \{3, 5, 290, 300\}$ , and  $Y^D = \{2, 15, 40, 50\}$ . It follows from Definition LTAD, Axiom NEPA, and Axiom REA that the ranking of the income vectors in this example has to be based on the amount of income received by the individuals 1 and 2 (because they receive less than the average amount of income in each of the four states of affairs). Consequently, it follows that we ought to ignore the fact that the individuals 3 and 4 receive a great deal more income in B and C than in A. And it is easily seen that *LTAD*, *NEPA* and *REA* imply that  $Y^A P Y^B$ ,  $Y^A P Y^C$ , and  $Y^B P Y^C$ . However, we are unable to rank between the three first-mentioned income vectors and  $Y^D$  by the use of *LTAD* and *REA*, because *REA* does not claim strict priority to the improvement of the well-being of the person in the worst-off position (if that were the case, then, of course,  $Y^D$  is the worst income vector).

But it turns out, though, that if we accept *LTAD* and *REA*, then we also have to accept *LM*.

**THEOREM 3.** *LM is the only choice rule that satisfies NEPA, MWA, CFC, A, SP, T, REA, and LTAD.*

*Proof.* Suppose that  $\exists Y^A, Y^B: y_1^A < y_1^B$  &  $Y^A P Y^B$ . The theorem is now proved by establishing a contradiction.

Step (1) Define  $Y^{\bar{A}}$  such that:  $[y_i^{\bar{A}} > y_i^A$  &  $y_i^{\bar{A}} \geq \frac{1}{n} \sum_{i=1}^n y_i^{\bar{A}}, \forall i - \{1\}$  &  $y_1^{\bar{A}} = y_1^A]$ . It follows from Axiom NEPA and Axiom SP that  $Y^{\bar{A}} P Y^A$ .

Step (2) Define  $Y^{\bar{B}}$  such that:  $[y_i^{\bar{B}} < y_i^B, \forall i$  &  $y_1^A < y_1^{\bar{B}} < \frac{1}{n} \sum_{i=1}^n y_i^{\bar{B}}$  &  $y_i^{\bar{B}} \geq \frac{1}{n} \sum_{i=1}^n y_i^{\bar{B}}, \forall i - \{1\}]$ . Axiom NEPA and SP, then, imply that  $Y^B P Y^{\bar{B}}$ .

Step (3) It follows from step (1) and (2) that, respectively,  $P^{\bar{A}} = \{y_1^{\bar{A}}\}$  and  $P^{\bar{B}} = \{y_1^{\bar{B}}\}$ . Hence, it follows from Axiom NEPA, Axiom REA, and Definition LTAD that  $Y^{\bar{B}}PY^{\bar{A}}$  (because  $y_1^{\bar{B}} > y_1^{\bar{A}}$ ).

Step (4): The required contradiction is now established by taking into account that  $Y^{\bar{A}}PY^{\bar{B}}$  (by hypothesis) &  $Y^{\bar{A}}PY^{\bar{A}}$  (from step (1)) &  $Y^{\bar{B}}PY^{\bar{B}}$  (from step (2)) implies  $Y^{\bar{A}}PY^{\bar{B}}$ , which is contradicted in step (3).

A similar conclusion as reported in Theorem 3 can be reached for a number of definitions of the least advantaged segment in society. The most obvious cases, in light of Theorem 3, should be those which are modifications of Definition LTAD, i.e. cases where the least advantaged segment is defined as people who have less than a certain percentage of the average income in society. But for our purpose, a more interesting extension of Theorem 3 is reached by making the following definition of the least advantaged segment:

**Definition LTWD (Less-Than-Wealthiest-Definition):**

For any  $I$ :  $P^I = \{i \in N | y_i^I < y_j^I = \dots = y_n^I\}$ .

Definition LTWD defines the least advantaged segment as people who have less than the wealthiest person in a state of affairs, and it is thus an extreme version of the suggestion of Rawls on this issue: "Thus all persons with less than half of the median income wealth may be taken as the least advantaged segment".<sup>16</sup> However, it is easily seen, that also for Definition LTAD (and any less extreme version of this definition) of the least advantaged segment, Axiom REA implies the leximin rule.

**Theorem 4:** *LM is the only choice rule that satisfies NEPA, MWA, CFC, A, SP, T, REA, and LTWD.*

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<sup>16</sup> Rawls (1971), p. 98.

*Proof.* The theorem is proved by the same line of reasoning as present in the proof of Theorem 3, with the following minor change in step (1) and (2): In proving Theorem 4 we have to define  $Y^{\bar{A}}, Y^{\bar{B}}$  such that  $y_2^I = y_3^I = \dots = y_n^I \geq \frac{1}{n} \sum_{i=1}^n y_i^I, I = \bar{A}, \bar{B}$ .

The line of reasoning underlying the proofs of Theorem 3 and Theorem 4 is the following: Anyone who is presently in the least advantaged segment in society can be lifted out of that segment (in the way they are defined in these theorems) by one of two contrary steps. We may either decrease or increase the income of some of the members of society, and thereby influence the cut-off line in the wanted direction. Thus, the least advantaged segment in  $Y^{\bar{A}}$  contains only the worst-off person, because anyone else who was part of the least advantaged segment in  $Y^A$  is lifted out of that segment by an appropriate increase in their income. Obviously, it follows from Axiom SP and Axiom NEPA that  $Y^{\bar{A}}$  ought to be preferred to  $Y^A$ . With respect to  $Y^B$ , however, people (except for the worst-off person) are lifted out of the least advantaged segment by an appropriate decrease in their income (decreasing the average income and the income of the wealthiest person). Thus,  $Y^B$  ought to be preferred to  $Y^{\bar{B}}$ . But now there is only one member left in the least advantaged segment in both  $Y^{\bar{B}}$  and  $Y^{\bar{A}}$ , and hence it follows from Axiom REA that  $Y^{\bar{B}}$  ought to be preferred to  $Y^{\bar{A}}$ . The required contradiction is, then, easily established by taking into account the ranking in the various steps of the proof.

One approach that has been hinted at by various authors,<sup>17</sup> is to define the least advantaged segment as the poorest X% of the population.

**Definition LTKD (Less-Than-k-Definition):**

*For any I:  $P^I = \{1, \dots, k\}, \exists (1 \leq k \leq n)$  .*

This definition outlines a framework that contains genuine alternatives to the leximin rule.

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<sup>17</sup> See for example Hammond (1976b), p. 272 and Atkinson and Bourguignon (1989), p. 11.

**Theorem 5:** *There are several choice rules that satisfy NEPA, MWA, CFC, A, SP, T, REA, and LTKD.*

*Proof.* An example (in addition to the leximin rule) will suffice. Consider the following choice rule that assigns lexicographic priority to the sum of the well-being of the  $k$  poorest members of society:  $[\sum_{i=1}^k W_i(y_i^A) > \sum_{i=1}^k W_i(y_i^B) \rightarrow Y^A P Y^B]$  &  
 $[\sum_{i=1}^k W_i(y_i^A) = \sum_{i=1}^k W_i(y_i^B) \& \sum_{i=k+1}^n W_i(y_i^A) > \sum_{i=k+1}^n W_i(y_i^B) \rightarrow Y^A P Y^B]$  &  
 $[\sum_{i=1}^k W_i(y_i^A) = \sum_{i=1}^k W_i(y_i^B) \& \sum_{i=k+1}^n W_i(y_i^A) = \sum_{i=k+1}^n W_i(y_i^B) \leftrightarrow Y^A I Y^B], \exists 1 < k < n.$  It is clear that both this choice rule and the leximin rule satisfy all the imposed axioms.

There is, however, a deep problem with the approach suggested by Definition LTKD, which is easily seen by pondering on the question about whether we ought to define the least advantaged segment as the  $k$  or  $k + 1$  poorest people in society.<sup>18</sup> Consider the following four situations:<sup>19</sup>

i. The  $k$ th worst-off person is a rich guy. A change in the tax system would reduce his wealth insignificantly. However, for some reason, the  $(k + 1)$ th worst-off person - the wealthy lady next door - would gain tremendously from such a change in the tax system. Everyone else in Wealth City is unconcerned about this part of the tax system.

ii. The  $k$ th worst-off person is a poor and undernourished lady. The  $(k + 1)$ th worst-off person is not well-off either, but he has nevertheless a reasonable standard of living. A change in the tax system could contribute to a minor improvement in the well-being of this poor lady, but the same change would, for some reason, greatly reduce the well-being of the  $(k + 1)$ th worst-off person (making him poor and undernourished - though not as poor as  $k$ ). Everyone else in Poverty City is unconcerned about this part of the tax system.

iii. The  $k$ th worst-off person is a poor and undernourished guy. The  $(k + 1)$ th worst-off person, though, is an extremely wealthy lady. A change in the tax system could contribute to a minor increase in the income of the poor guy, but would at the same time bring about a substantial decrease in the wealth of the rich lady (though she would still live in affluence - no doubt about that). Everyone else in Inequality City is unconcerned about this part of the tax system.

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<sup>18</sup> Of course, this problem is also present in the leximin rule (which is the rule attained by letting  $k = 1$ ).

<sup>19</sup> Some readers may find it trivial to discuss whether we should include the  $(k + 1)$ th worst-off person in the least advantaged segment or not. But, of course,  $k$  and  $k + 1$  may be interpreted as groups (with large numbers of people), and, thus, the relevance of this discussion should be rather obvious.

iv. The  $k$ th worst-off person and the  $(k + 1)$ th worst-off person - two brothers who run the local gas station - have the same income. They are not well-off, but neither are they poor or undernourished. A change in the tax system could improve their income tremendously, but would, for some reason, cause a minor reduction in the income of those who have a lower income than the two brothers (though none of them, that is to say, is really poor). Everyone else in Equality City is unconcerned about this part of the tax system.

Three of the four examples illustrate situations which make the approach suggested by imposing Definition LTKD on Axiom REA an untenable normative position to take up.<sup>20</sup> (Does the reader agree?) The situation in Equality City is maybe the most obvious case. If we are allowed to make a trade-off between the tremendous gain of one of the brothers and the losses of those worse off, then why should we not be allowed to take into account the gain of the second brother (that would double the counted gain from the tax policy, and might be what is needed in order to overrule the losses of the rest of the least advantaged segment)? The two brothers are equally well-off in both states of affairs under consideration, and hence no plausible argument can defend the cut-off line suggested by Definition LTKD.

Thus, the examples from respectively Poverty City and Wealth City are not needed in order to reject choice rules of the type suggested in proving Theorem 5. But they are still of interest, because they hint at the solution to our problem. In both cases, the reduction in the income of the  $(k + 1)$ th worst-off person is ignored. But is that a reasonable way of evaluating the change in tax policy in Wealth City and Poverty City? Or is there something that tells us that we ought to allow a trade-off between the interests of the  $k$ th worst-off person and the  $(k + 1)$ th worst-off person in those two cases?

Let us consider the argument outlined by Rawls in his defence of the claim that people would choose the second principle of justice in the original position: "[T]he person choosing has a conception of the good such that he cares very little, if anything, for what he might gain above the minimum stipend that he can, in fact, be sure of by following the maximin rule. It is not worthwhile for him to take a chance for the sake of a further advantage, especially when it may turn out that he loses much

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<sup>20</sup> Some readers may argue that any normative position that endorses a cut-off line is untenable. That is the claim of the utilitarian framework. It is beyond the scope of this paper to discuss the pros and cons of such a position, and I assume here that a reasonable interpretation of the Rawlsian framework may constitute a tenable normative position.

that is important to him".<sup>21</sup> But if we approach the tax policy issue in Wealth City by placing ourselves in the original position, would we then care about the insignificant loss of the wealthy guy? Or would we perceive the change in the wealth of both persons as basically unimportant, and, thus, endorse the change in tax policy if the gain of the wealthy lady exceeds the loss of the wealthy guy? Correspondingly, would we find the loss of the  $(k + 1)$ th worst-off person unimportant in the evaluation of the change in tax policy in Poverty City? Or would we find it worthwhile to reject the change in tax policy in order to avoid the severe decrease in living standard of this person?

Certainly, only the circumstances in Inequality City may provide a reasonable defence for neglecting the interests of the  $(k + 1)$ th worst-off person. Only in that situation is it possible to use the kind of reasoning suggested by Rawls in order to defend a limited range of concern. It is plausible to argue that the extremely wealthy lady would - behind a veil of ignorance - recognize that the loss of some wealth is of no basic importance in her life, and that she therefore would agree that the change in tax policy should take place if it contributes to a minor increase in the income of the poor guy. But this argument has nothing to do with the overall relative position of the two persons involved, whether it is with respect to the average or maximum income or the number of people that are poorer than them in the society in question. The issue of interest is whether the two persons involved have more or less than a minimum stipend (where the level of this stipend is to be decided in the original position), and the impression given by the example is that the income of the wealthy lady and the income of the poor guy is respectively above and below this norm of completeness. Consequently, the poor guy is the only one of these two that belongs to the least advantaged segment in society, and his interests should therefore be assigned lexicographic priority.

Hence, Rawlsian reasoning presupposes a conception of the good that makes the possession of income above a minimum stipend of no fundamental importance in the lives of people.<sup>22</sup> Accordingly, this assumption ought to be the foundation for the

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<sup>21</sup> Rawls (1971), p. 154.

<sup>22</sup> There will, of course, be disagreement about what the appropriate norm of completeness ought to be, but that is an issue which we can ignore here.

definition of the least advantaged segment in order to attain a choice rule that conveys Rawlsian intuition.

**Definition LTMD (Less-Than-Minimum-Definition):**

For any  $I$ :  $P^I = \{i \in N \mid y_i^I < z\}$ .

$z$  denotes the minimum standard to be agreed upon in the original position.<sup>23</sup>

**Theorem 6:** *There are several choice rules that satisfy NEPA, MWA, CFC, A, SP, T, REA, and LTMD.*

*Proof.* An example (in addition to the leximin rule) will once again suffice. Consider the following choice rule, that assigns lexicographic priority to the alleviation of the overall 'poverty gap' in the least advantaged segment:  

$$\left[ \sum_{i \in P^A} (W_i(y_i = z) - W_i(y_i^A)) < \sum_{i \in P^B} (W_i(y_i = z) - W_i(y_i^B)) \rightarrow Y^A P Y^B \right] \quad \&$$

$$\left[ \sum_{i \in P^A} (W_i(y_i = z) - W_i(y_i^A)) = \sum_{i \in P^B} (W_i(y_i = z) - W_i(y_i^B)) \quad \& \quad \sum_{i \in R^A} W_i(y_i^A) > \sum_{i \in R^B} W_i(y_i^B) \right.$$

$$\left. \rightarrow Y^A P Y^B \right] \quad \& \quad \left[ \sum_{i \in P^A} (W_i(y_i = z) - W_i(y_i^A)) = \sum_{i \in P^B} (W_i(y_i = z) - W_i(y_i^B)) \quad \&$$

$$\sum_{i \in R^A} W_i(y_i^A) = \sum_{i \in R^B} W_i(y_i^B), \leftrightarrow Y^A I Y^B \right].$$
It is easy to check that both this choice rule and the leximin rule satisfy the imposed axioms.

The choice rule suggested in proving Theorem 6 illustrates one interesting leximingroup interpretation of the Rawlsian position. Yet, one objection to this rule may be that it does not pay attention to the distribution of income within the least advantaged segment. In order to do that, though, we have to demand further restrictions (than those imposed by Axiom CFC) on the invariance class of people's well-being functions, and, in the next section, I shall consider this possibility.

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<sup>23</sup> It should be noticed that according to *LTMD*, everyone in a society may belong the least advantaged segment. Rawls, however, assumes that the society under consideration has 'reasonably favourable conditions' (see Rawls (1993), p. 297), which may be interpreted as saying that it is possible for everyone to have an income above the minimum standard. Thus, everyone will not belong to the least advantaged segment in societies of this kind. The introduction of such an assumption would not change any results in this discussion.

## 5. Modifications

Axiom CFC and Axiom NEPA are rather demanding, and, thus, it can be of a certain interest to discuss the robustness of the results of section 4 with respect to alternative conjectures about people's preferences and about the invariance requirement.

Axiom CFC involves the claim that we are able to both compare people's gains and losses and levels of well-being, i.e., we allow any transformation of the well-being function that preserves equalities between units and levels of people's well-being functions. Undoubtedly, it may be fair to question this claim, and one suggestion may, then, be to argue that we should substitute the requirement of ordinal interpersonal comparability for Axiom CFC, i.e., we should only allow transformations of the well-being function that preserve equalities between levels of people's well-being functions. If we impose this restriction on the analysis, though, it is easily seen that the leximin rule is the only choice rule that satisfies the set of axioms discussed in section 4.<sup>24</sup>

However, as I see it, there is a more plausible modification of Axiom CFC which has been overlooked in the social choice literature, to wit the modification that allows for various transformation requirements for various segments of society. In my view, it seems reasonable to claim that we have relevant scales which can be applied in order to settle a minimum stipend  $z$ , and, moreover, to make interpersonal comparisons of well-being among the members of the least advantaged segment. But I doubt the possibility of making interpersonal comparisons of well-being in the better off group, and, thus, there may be a case for introducing an axiom that takes into account such a distinction between the least advantaged segment and the better off group. Moreover, within this framework, there may also be a case for allowing further restrictions (than those captured by Axiom CFC) on the invariance class within the least advantaged segment. Hence, this line of reasoning may allow interesting variants of the choice rule suggested in proving Theorem 6, though it is beyond the scope of this essay to pursue these possibilities.<sup>25</sup>

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<sup>24</sup> See Deschamps and Gevers (1978).

<sup>25</sup> These possibilities are discussed in Tungodden (1994c).



Axiom NEPA has played an important role in the proving of the theorems reported in the preceding section. Some readers may find this axiom controversial, and, thus, I shall briefly discuss the following two plausible modifications:

**Axiom WEA (Weak-Envy-Axiom):**

*For any pair of income vectors  $Y^A, Y^B$ :  $[y_k^A > y_k^B \ \& \ y_j^B \geq y_j^A, \forall j \in \{i \in N | y_k^B \leq y_j^B\}] \rightarrow Y^A P^k Y^B, \forall k.$*

**Axiom WPA (Weak-Pity-Axiom):**

*For any pair of income vectors  $Y^A, Y^B$ :  $[y_k^A > y_k^B \ \& \ y_j^A \geq y_j^B, \forall j \in \{i \in N | y_j^B < y_k^B\}] \rightarrow Y^A P^k Y^B, \forall k.$*

Axiom WEA postulates that people are concerned about their relative position in society, and, thus, in some situations they may prefer a lower personal income if their relative position at the same time is strengthened. Axiom WPA, on the other hand, presumes that people feel sympathy for those who are worse off than themselves, and the axiom incorporates the assumption that people sometimes may prefer a lower level of personal income if at the same time the well-being of the worse off group is improved. Both axioms are obviously stylized assumptions about people's preferences, but each of them probably reflects a piece of the true picture.

Axiom WEA has severe consequences for the validity of the proofs in the preceding section; it cannot be substituted for Axiom NEPA in proving the theorems 1, 3, and 4.<sup>26</sup> But that is not a surprising conclusion. If the worst-off person envies the higher income level enjoyed by the rest of the population, then the leximin rule will not solely be concerned with the income level of the worst-off person (which is a premise for the line of reasoning underlying the proofs of these theorems). However, the theorems can easily be proved in the same manner in the space of well-being (i.e. when the income level of people is substituted with their well-being level in the respective proofs). Hence, the conjecture of Axiom WEA does not overrule the reported results, but severs only the neat link between the distribution of well-being

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<sup>26</sup> Step (1) becomes invalid in each of the proofs.

and the distribution of income that is attained by the separability assumption of Axiom NEPA. The link is also severed by the introduction of Axiom WPA, though this axiom does not affect the validity of the proofs of the theorems 1, 3, and 4. However, both axioms cause some problems for the practical implementation of the leximingroup rule suggested in the proof of Theorem 6, because an additional difficulty is now added to the interpretation of the minimum standard of income. If either Axiom WEA or Axiom WPA is accepted, then the minimum standard of income will have to depend on the particular distribution of income. If not, then people in some cases may prefer to belong to the least advantaged segment with one income distribution instead of being in the better off group with another income distribution, and the suggested choice rule would then in cases of this kind violate Axiom SP. However, this problem is avoided if we accept the following assumption about the preference structure in society: Axiom NEPA captures the preference structure of the least advantaged segment, and Axiom WEA or Axiom WPA the preference structure of the better off group. It is, however, left to the reader to judge whether this is a reasonable proposal or not.

## **6. Final Remarks**

The message of this essay is that the second principle of justice outlined by Rawls ought to be interpreted as a limited aggregative principle, and not as a leximin rule which entirely focuses on the well-being of the worst-off person in a society. And in the analysis I have illustrated one interesting leximingroup social choice rule (for the problem of ranking various income distributions) that formalize this interpretation of Rawlsian intuition. This message is of importance, because it has been common in the literature of social choice theory to argue that we face a choice between the utilitarian principle of Bentham and the leximin principle of Rawls.<sup>27</sup> But if that were the case, then it appears implausible that anyone ever should reject the utilitarian point of view. How could anyone reasonably claim that we should appoint one position to dictator in social choices? Hence, the victory of Bentham should be expected and accepted. However, the social choice rule presented in this essay represents a plausible alternative to the utilitarian point of view, and, thus, makes the battle of Bentham and Rawls somewhat more interesting.

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<sup>27</sup> See for example Sen (1977) and Deschamps and Gevers (1978).

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# 5

## On Subgroup Consistency in Poverty Measurement<sup>1</sup>

### 1. Introduction

One of the main claims in the poverty measurement literature the last ten years has been that a poverty measure should reflect increased overall poverty *if - ceteris paribus -* a subgroup of the population experiences an increase in poverty. The claim has been presented as the subgroup consistency axiom,<sup>2</sup> and on this basis a group of poverty measures has been rejected: "By this criterion the Sen-measure and its variants are not well suited for poverty analysis by subgroup, since they violate this consistency requirement in certain cases".<sup>3</sup>

The subgroup consistency axiom is intuitively appealing and reflects a feature of the poverty problem which it is very hard to reject. (It may be regarded as an analogue to the well-known monotonicity axiom, which demands that a poverty measure should reflect a decrease in overall poverty *if - ceteris paribus -* one person's poverty is reduced.<sup>4</sup>) Thus, poverty figures reported on the basis of a subgroup inconsistent poverty measure will certainly be met with scepticism. If (for example) it is reported that the problem of poverty increases in the subgroups of society, and at the same time (and within the same framework) claimed that the overall poverty problem decreases, then an inevitable and reasonable response is to question whether the various poverty levels are measured correctly. Hence, if the Sen-measure lacks the subgroup consistency property, it appears sensible to reject this approach to poverty measurement.

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<sup>1</sup> For their comments on earlier versions of this paper, I am grateful to Rune Jansen Hagen, Karl Ove Moene, Ottar Mæstad, Agnar Sandmo, Amartya Sen, and Svein Aage Aanes.

<sup>2</sup> See Foster et.al. (1984,1991).

<sup>3</sup> Foster et.al. (1984), p. 18.

<sup>4</sup> See respectively Foster et.al. (1991) and Sen (1976).

The purpose of this essay, though, is to reveal that the ongoing debate about subgroup consistency is misleading. When we discuss the concept of subgroups in Sen's approach, a subtle treatment is needed. We have to be aware of the importance of reference groups in the Sen-measure, and make the appropriate distinction between reference groups and subgroups. It turns out, in fact, to be rather easy to demonstrate that the Sen-measure is not at all violating the subgroup monotonicity axiom, and moreover to verify that the conventional line of reasoning on this issue is based on a misrepresentation of the framework of Sen.

In section 2, I describe in brief the Sen-measure and the class of Foster-measures. In section 3, the main arguments of the essay are outlined, and in section 4, I make some general comments on the choice between these two approaches in the measurement of poverty.

## 2. The Poverty Measures

Let me first describe to the point the most important features of the Sen-measure and the class of Foster-measures.<sup>5</sup> For our purpose, it is only necessary to take into account the part of the income distribution  $Y^I$  of a society  $I$  that covers the poor part of the population, i.e. the income vector  $Y_p^I = \{y_i \in Y^I \mid y_i \leq z\}$ , where  $z$  is the income poverty line and  $y_i$  is the income of individual  $i$ . Moreover, it shall be convenient to work with an ordered version of the income vector  $Y_p^I$ , where the  $q$  elements are numbered in order of income, i.e.  $0 \leq y_1 \leq \dots \leq y_q$ .<sup>6</sup>

The class of Foster-measures is additively separable in the elements of the income vector  $Y_p^I$ , and may be defined as follows:

$$(1) \quad P^F \equiv \frac{1}{n[z]^\alpha} \sum_{i=1}^q (z - y_i)^\alpha,$$

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<sup>5</sup> These are the main contributions in the poverty measurement literature; see Foster (1984) for a survey.

<sup>6</sup> By making this assumption, we introduce an anonymity property in poverty measurement, i.e. any reordering of the income vector does not change our characterization of the poverty problem. Thereby, we may assume that the same person obtains the same position in every income vector under consideration. This assumption is considered as uncontroversial in the poverty measurement literature, and is accepted without any further discussion in this paper. But see Tungodden (1994).

where  $n$  is the total population and  $\alpha$  is a normative parameter. It is easily seen from (1) that  $P^F$  equals the head-count ratio  $H = \frac{q}{n}$  when  $\alpha = 0$  and the aggregate poverty gap

$$I = \sum_{i=1}^q \frac{(z - y_i)}{qz} \text{ when } \alpha = 1.$$

The Sen-measure  $P^S$  is not additively separable in the elements of the income vector  $Y_p^I$ , and there are two ways of defending a non-separable approach. First, we may argue that the importance we attach to a person's poverty level should depend on the overall poverty problem in the society in question. I have doubts about the appropriateness of this normative claim, but I shall not elaborate on the pros and cons of it here.<sup>7</sup> However, I find the second argument in favour of a non-separable approach more plausible, to wit that there may be important physical and psychological interconnections that have to be taken into account in order to represent correctly the well-being of poor people in poverty measurement. This has been argued by Sen, who claims that "[i]t seems reasonable to argue that any person's poverty cannot really be independent of how poor the others are. Even with exactly the same absolute short-fall, a person may be thought to be 'poorer' if the other poor have short-falls smaller than his, in contrast to the case in which his short-fall is less than that of others".<sup>8</sup> In the rest of the essay, the latter argument is presumed to constitute an important part of the foundation of a non-separable approach.<sup>9</sup>

Sen incorporates these interconnections in poverty measurement by applying the Borda Ranking Rule:<sup>10</sup> The poor individuals are ranked in order of income, where the least poor individual is ranked as number one (and so on). These ranking numbers are, then, applied as the weights  $v_i(z, Y_p^I)$  of the income gaps of the poor people. Hence, having in mind that we work with ordered versions of the income vector, it follows that  $v_{i=10}(z, Y_p^I) = 10$  (and so forth). Thus, the weight assigned to the income gap of an individual depends on the income structure of the society in question, which (at least partly) reflects the idea that the well-being of this person depends on this same income structure (and not only on his or her personal income level).

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<sup>7</sup> But see Tungodden (1994).

<sup>8</sup> Sen (1981), p. 31.

<sup>9</sup> On this issue, see also Tungodden (1994).

<sup>10</sup> For a general discussion of the Borda Ranking Rule, see Sen (1982), p. 186-187.

The following axiom provides a neat normalization of the approach of Sen:<sup>11</sup>

**Axiom N (The Normalized Poverty Value):**

*If the poor have the same income, then  $P^S = HI$ .*

Let  $G_p$  represent the Gini-coefficient for the poor population. The Sen-measure may, then, be expressed as follows:<sup>12</sup>

$$(2) \quad P^S = H(I - (1 - I)G_p).$$

It is easily seen from (2) that  $P^S = HI$  when  $G_p = 0$ , i.e. when there is no inequality within the poor part of the population.

**3. Subgroup Consistency and Reference Groups**

Foster et.al. argue that the Sen-measure violates the subgroup consistency requirement, and they state the axiom that takes care of this requirement as follows:<sup>13</sup>

**AXIOM S (Subgroup Monotonicity Axiom):**

*Let  $Y^*$  be a vector of incomes obtained from  $Y$  by changing the incomes in subgroup  $j$  from  $Y^j$  to  $Y^{*j}$  where  $n_j$  is unchanged. If  $Y^{*j}$  has more poverty than  $Y^j$ , then  $Y^*$  must also have a higher level of poverty than  $Y$ .*

Their argument is supported by the following example:<sup>14</sup> Let the initial income distribution in a society be represented by the vector  $Y = (1, 6, 6, 7, 8, 12)$ . Divide the society into two subgroups with income vectors  $Y^1 = (1, 6, 12)$  and  $Y^2 = (6, 7, 8)$ . The poverty line in this society is  $z = 14$ . The income distribution in subgroup 1 changes,  $Y^{1*} = (3, 3, 13)$ , and the problem of poverty in subgroup 1 increases according to the Sen-measure (i.e.  $P^S(Y_p^{1*}, z) > P^S(Y_p^1, z)$ ). The situation is unchanged in subgroup 2, i.e.  $Y^{2*} = Y^2$ , and hence  $P^S(Y_p^{2*}, z) = P^S(Y_p^2, z)$ . Axiom S claims that in this situation, it follows inevitably

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<sup>11</sup> Sen (1976), p. 223.

<sup>12</sup> See Sen (1976, 1981) for a comprehensive discussion of this result.

<sup>13</sup> Foster et.al. (1984), p. 763.

<sup>14</sup> See Foster et.al (1984), p. 763. A similar example is given in Foster et.al. (1991), p. 688.



that the overall poverty problem in society has increased. Thus, if we measure the overall poverty problem in society by applying the income vectors  $Y$  and  $Y^* = (3,3,6,7,8,13)$ , then  $P^S(Y^*, z) > P^S(Y, z)$  ought to be true. However, the opposite is the case, and Axiom S is violated. Consequently, the Sen-measure appears to lack the subgroup consistency property, and it is tempting to conclude that this framework is inappropriate for poverty measurement.

The problem of this argument, though, is that it ignores the particular importance Sen assigns to reference groups. In the framework of Sen, the reference group is fundamental in incorporating physical as well as psychological interconnections among the poor in society. A redefinition of a person's reference group thus marks a substantial change in the setting of the analysis, and there is no obvious link between poverty figures derived from different assumption about poor people's reference groups. In the preceding example, the problem is precisely that one is juggling with the reference groups in question. In one case (when poverty is measured by subgroups) the individual's reference group is limited to a subgroup of society, but in the next case (when poverty is measured by the whole sample) the overall society is the reference group. Obviously, the reference group - if it is to reflect some factual interconnections - either has to be the society or the subgroup, and, thus, the demand for consistency in the example is unfounded.<sup>15</sup> Hence, the example does not prove that the Sen-measure is subgroup inconsistent.

In fact, the line of reasoning in the example violates the axiomatic structure of the Sen-measure. The individuals in the poor part of the population are in the first part of the example ranked according to their income position in a subgroup of society, and not according to their position in the overall poor population. This latter ranking, though, is presumed in the construction of the Sen-measure:<sup>16</sup>

#### **Axiom R (Ordinal Rank Weights):**

*The weight  $v_i(z, Y_p)$  on the income gap of person  $i$  equals the rank order of  $i$  in the interpersonal welfare ordering of the poor.*

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<sup>15</sup> Of course, it appears reasonable to claim that various reference groups may be defined for various types of interconnections, but this fact does not change the conclusions of this section. Thus, I ignore this additional complexity.

<sup>16</sup> Sen (1976), p. 376. We may in this discussion ignore the distinction between an income ordering and a welfare ordering, since Sen later on in his discussion assumes that a richer person also is better off - and, thus, people obtain the same position in both the income ranking and the welfare ranking.

The idea of Axiom R is to incorporate interconnections among the poor people in society in the measurement of poverty, and, thus, the overall poor population is the relevant reference group of a poor person.<sup>17</sup> The Sen-measure is derived from this assumption, and, hence, the Sen-measure is not defined for situations where the relevant reference group for poor people (for some reason) should be a subgroup of the poor population.

Is it, then, possible to modify the framework of Sen such that it also can be applied in a society where the relevant structure of reference groups is more complex than what is assumed in Axiom R? Assume that there are  $K'$  ( $k' = 1, \dots, K'$ ) reference groups in a society, and let  $y_i^{k'}$  denote the income of individual  $i$  in reference group  $k'$ . We may in these situations work with a slightly modified version of Axiom R:

**Axiom R<sup>Γ</sup> (Ordinal Reference Group Rank Weights):**

*The weight  $v_i^{k'}$  ( $z, Y_p^{k'}$ ) on the income gap of person  $i$  in reference group  $k'$  equals the rank order of  $i$  in the interpersonal welfare ordering of the poor in reference group  $k'$ .*

Moreover, we may introduce the following normalization axiom for the measurement of poverty in reference groups:

**Axiom N<sup>Γ</sup> (Normalized Reference Group Poverty Value):**

*If the poor in reference group  $k'$  have the same income, then  $P_{k'}^{S'} = H^{k'} I^{k'}$ .*

Axiom N<sup>Γ</sup> should be a reasonable suggestion in the light of Axiom N. By introducing Axiom R<sup>Γ</sup> and Axiom N<sup>Γ</sup> in the framework of Sen, it is easily seen that the poverty level of the reference group (for large numbers of the poor) is given by:

$$(3) \quad P_{k'}^{S'} = H^{k'} \left[ I^{k'} + (1 - I^{k'}) G_p^{k'} \right],$$

where  $P_{k'}^{S'} = 0$  when no one is poor in reference group  $k'$ , and  $P_{k'}^{S'} = 1$  when no one has any income in reference group  $k'$ .

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<sup>17</sup> On this issue, see also Sen (1981), p. 187.

We may now state the following theorem:

**Theorem 1:** *For large numbers of the poor, the following extension of the Sen-measure:*

$$P^{S'} \equiv \sum_{k'=1}^{K'} \frac{n^{k'}}{n} P_{k'}^{S'}$$

*satisfies the axioms S, N, R<sup>T</sup>, and N<sup>T</sup>.*

*Proof.* It follows straightforwardly from (3) that  $P^{S'}$  does not violate the axioms S, R<sup>T</sup>, and N<sup>T</sup>. It is also rather easily seen that  $P^{S'}$  does not violate Axiom N: If there is no inequality among the poor in the various subgroups, then it follows from (3) that

$P^{S'} = \sum_{k'=1}^{K'} \frac{n^{k'}}{n} H^{k'} I^{k'}$ . Moreover, if the poverty gap is the same in all reference groups (i.e.

$I^{k'} = I^{l'} = \dots = I^{K'}$ ), then  $P^{S'} = I^{k'} \sum_{k'=1}^{K'} \frac{n^{k'}}{n} H^{k'}$ . Hence, it follows that Axiom N is not

violated.

The most important message of Theorem 1 is that in a society with more than one reference group, the overall poverty problem has to be measured within a disaggregated framework if we are to capture the relevant interconnections. Thus, a misplaced question has been posed in the poverty measurement literature. In societies with several reference groups, it is not a question about whether the Sen-measure (or any other measure) is decomposable or not, but about whether these measures are able to capture the true nature of the object at issue. In these cases, the nature of the object one aims to measure demands a disaggregated approach, and consequently, it makes no sense to compare the results derived from respectively a disaggregated and an aggregated approach (as is done in the example discussed at the outset of this section). The results from an aggregated approach are of no meaning in situations where one wants to take into account the interconnections within the various reference groups of society.

Still, we may in some cases be interested in measuring the poverty level in subgroups of a reference group (where the reference group may be either a part of the poor population or the overall poor population). How shall we approach such a situation within the framework of Sen? The problem in cases of this kind is that the poverty level in a subgroup is sensitive

to changes in the poverty level in the rest of the reference group, because there are interconnections between people in different subgroups (who belong to the same reference group). Hence, it is impossible to normalize the subgroup poverty level without referring to the overall poverty level in the reference group; the poverty level for a subgroup  $j^{k'}$  ( $j^{k'} = 1, \dots, J^{k'}$ ) is not uniquely defined in the situation where everyone in the subgroup has the same income level. The poverty level of the subgroup also depends on the relative position of the poor members of the subgroup within the overall poor population of the reference group. Consequently, it is in the normalization of the subgroup poverty level impossible to apply a normalization procedure that corresponds to Axiom N.

An alternative normalization procedure could be to demand that when no one in subgroup  $j^{k'}$  has any income *and* no one else in reference group  $k'$  is poor, then  $P_{j^{k'}}^{S^{k'}} = 1$ . It is in this situation impossible for the people of subgroup  $j^{k'}$  to become any poorer (neither in the absolute dimension nor in the relative dimension<sup>18</sup>), and, thus, this normalization procedure would imply that the subgroup poverty level is measured relative to the worst possible situation for the subgroup.<sup>19</sup> However, it is easy to verify that such a normalization of the subgroup poverty level would imply a violation of Axiom N in the measurement of reference group poverty.

There is, however, a slightly different subgroup normalization procedure which is consistent with Axiom N:

**Axiom N<sup>S</sup> (Normalized Subgroup Poverty Level):**

*If no one of the poor in subgroup  $j^{k'}$  has any income, and no one else in reference group*

*$k'$  is poor, then  $P_{j^{k'}}^{S^{k'}} = \frac{q^{j^{k'}}}{n^{k'}}$ .*

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<sup>18</sup> Here, I assume that any interconnections between the poor part and the nonpoor part of the population have been captured in the poverty line.

<sup>19</sup> It is important to have in mind that the population size is assumed constant in this discussion. Otherwise, it would have been more controversial to define the worst possible situation for a subgroup in the way it is done in this paragraph. For a further discussion of this issue, see Tungodden (1994).

Axiom N<sup>S</sup> implies that the subgroup poverty level is measured relative to the worst possible situation for the overall *reference group*, and it is easily seen that  $P_{j^{k'}}^{S^r} = 1$  when subgroup  $j^{k'}$  coincides with reference group  $k^r$  and no one in the reference group has any income.

Measurement of subgroup poverty levels has to be based on the ranking procedure described in Axiom R<sup>T</sup> (which coincides with Axiom R if there is only one reference group in the society). Thus, the poverty level of subgroup  $j^{k'}$  is given by:

$$(4) \quad P_{j^{k'}}^{S^r} = a^{j^{k'}} \sum_{i \in j^{k'}} (z - y_i^{k'}) v_i^{k'},$$

where  $v_i^{k'}$  is the rank order of individual  $i$  in the interpersonal welfare ordering of reference group  $k^r$  and  $a^{j^{k'}}$  is the normalization parameter. It is important to have in mind, though, that  $P_{j^{k'}}^{S^r}$  is *not* independent of the income level in other subgroups within the reference group  $k^r$ . Any change in the income level of some of the other subgroups that influence the ranking of an individual in subgroup  $j^{k'}$  will change the poverty level in  $P_{j^{k'}}^{S^r}$ .

According to (4) and Axiom N<sup>S</sup>:<sup>20</sup>

$$(5) \quad \frac{q^{j^{k'}}}{n^{k'}} = \frac{1}{2} [a^{j^{k'}} z q^{j^{k'}} (q^{j^{k'}} + 1)].$$

Hence, it easily seen that the poverty level of a subgroup (within a reference group) may be measured as follows within the framework of Sen:<sup>21</sup>

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<sup>20</sup> Axiom N<sup>S</sup> and (4) imply (5) for the following reason: In the situation covered by Axiom N<sup>S</sup>, the poor individuals in subgroup  $j^{k'}$  have no income, and, moreover, constitute the whole poor population in reference group  $k^r$ . Thus, if we take into account (4),  $\frac{q^{j^{k'}}}{n^{k'}} = a^{j^{k'}} z(1 + \dots + q^{j^{k'}})$ , and (5) follows straightforwardly.

<sup>21</sup> There is a minor problem within the framework of Sen in a discussion of subgroup poverty, to wit how do we rank people with the same income? Sen (1976), p. 220, claims that the Sen-measure is insensitive to how we solve this problem, but this is obviously not correct when we extend the framework to also cover the measurement of subgroup poverty levels. As is easily seen from (4), the ranking problem may cause two identical subgroups (being part of the same reference group) to end up with (slightly) different poverty levels.

$$(6) \quad P_{j^{k'}}^{S^s} = \frac{2}{n^{k'} z (q^{j^{k'}} + 1)} \left[ \sum_{i \in j^{k'}} (z - y_i^{k'}) v_i^{k'} \right].$$

Thus, the following theorem may be stated:

**Theorem 2:** *For large numbers of the poor, the following extension of the Sen-measure:*

$$P_{k'}^{S^s} \equiv \sum_{j^{k'}=1}^{j^{k'}} \frac{q^{j^{k'}}}{q^{k'}} P_{j^{k'}}^{S^s}$$

*satisfies the axioms S, N, R<sup>r</sup>, and N<sup>s</sup>.*

*Proof.* It follows straightforwardly from (4), (5), and (6) that  $P_{j^{k'}}^{S^s}$  satisfies the axioms S, R<sup>r</sup>, and N<sup>s</sup>. In addition, if everyone in the poor part of the population of reference group  $k'$  has the same income  $\bar{y}$  (i.e.  $y_1^{k'} = \dots = y_{q^{k'}}^{k'} = \bar{y}$ ), then it follows from (6) that

$P_{k'}^{S^s} = \sum_{j^{k'}=1}^{j^{k'}} \frac{q^{j^{k'}}}{q^{k'}} \left[ \frac{2}{n^{k'} z (q^{j^{k'}} + 1)} (z - \bar{y}) \sum_{i \in j^{k'}} v_i^{k'} \right]$ . For large numbers of poor, this expression may be written as follows:  $P_{k'}^{S^s} = \frac{2(z - \bar{y})}{q^{k'} n^{k'} z} (1 + \dots + q^{k'})$ . Hence, in situations where everyone in the poor part of the population has the same level of income,  $P_{k'}^{S^s} = H^{k'} I^{k'}$ . Thus,  $P_{k'}^{S^s}$  satisfies Axiom N.

The modified version of the Sen-measure reported in Theorem 2 is subgroup consistent, as may easily be verified with respect to the outlined example.<sup>22</sup> Assume that everyone belongs to the same reference group in the example.<sup>23</sup> Axiom R<sup>r</sup>, then, implies that the weight assigned to the poverty gap of an individual depends on this individual's ranking in

<sup>22</sup> By applying Theorem 2, the sum of the reported poverty figures of the subgroups do not equal the reported total poverty level. This is due to the fact that Theorem 2 is derived for large numbers of the poor - and the example only counts six individuals.

<sup>23</sup> We may alternatively assume that the two subgroups of the example constitute two distinct reference groups. By applying Theorem 1 it is easily seen that the framework of Sen also in this case is subgroup consistent. This exercise is trivial in the light of the discussion above, and is left to the reader, therefore.

the overall income distribution  $Y^{k'} = (1,6,6,7,8,12)$ .<sup>24</sup> By applying (3), (6), and Theorem 2, it is straightforwardly seen that the initial overall poverty level in the reference group is  $P_{k'}^{S^*} \approx 0,63$ , and that the initial subgroup poverty levels are respectively  $P_{1^{k'}}^{S^*} \approx 0,71$  and  $P_{2^{k'}}^{S^*} \approx 0,39$ . When we conduct a similar computation after the change in the income distribution in subgroup  $1^{k'}$ , the following results are obtained:  $P_{*1^{k'}}^{S^*} \approx 0,64$ ,  $P_{*1^{k'}}^{S^*} \approx 0,73$ , and  $P_{*2^{k'}}^{S^*} \approx 0,39$ . Hence, the conclusion is very different from the one reported by Foster et.al.<sup>25</sup> Overall poverty and poverty in subgroup  $1^{k'}$  have increased due to the worsening in the situation of the second worst off member in society (and in spite of the improvement in the situation of the worst off member in society), and the poverty level of subgroup  $2^{k'}$  is unchanged (because the change in income in subgroup  $1^{k'}$  did not have an influence on the positions of the members of  $2^{k'}$  in the overall ranking within  $k'$ ). Obviously, there is no violation of the subgroup consistency property in this example.

#### 4. Final Remarks

I have proved in this essay that the Sen-measure is a subgroup consistent poverty measure, and that it may be extended to cover cases where several reference groups are present. The main dichotomy in the current poverty measurement literature is therefore *not* - as frequently claimed - about subgroup consistency, but about how different poverty measures take care of interconnections between poor people. The class of Foster-measures neglects this aspect of poverty, the Sen-measure does not.

I shall not attempt to argue in favour of one of these two approaches, because I guess that both frameworks may have a role to play in the measurement of poverty.<sup>26</sup> The class of Foster-measures gives some cutting power in empirical work, but may overlook an essential part of the overall picture in certain situations. The Sen-measure is somewhat more demanding in empirical work, but may sometimes take into account vital aspects of the nature of poverty. Thus, computational simplicity aside, the nature of the kind of poverty one aims to measure ought to be the essential criterion in a choice between these

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<sup>24</sup> In the computation, it is assumed that the second worst off person in society - both before and after the change in income - belongs to subgroup  $1^{k'}$ . Obviously, this assumption is trivial, and does not affect the general conclusion derived from this example.

<sup>25</sup> Foster et.al. (1984).

<sup>26</sup> See also Sen (1992), p. 106-107, on this issue.

two frameworks, and not - as this essay has revealed - a misleading debate about the property of subgroup consistency. However, both the Sen-measure and the class of Foster-measures face some deep problems in situations where the population size varies, and, moreover, do not distinguish clearly between factual and normative considerations. Hence, some further development of the framework of poverty measurement is needed, but I leave such an elaboration for another occasion.<sup>27</sup>

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<sup>27</sup> See Tungodden (1994).



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# 6

## A New Approach to Normative Poverty Measurement<sup>1</sup>

### 1. Introduction

Normative poverty measures are often criticised for giving a rather arbitrary representation of the problem of poverty in a society.<sup>2</sup> Different measures rank states of society differently, and there seems to be no reasonable way of choosing among the existing alternatives. In addition, normative measurement of poverty is usually based on income data, and the relation between income and well-being is frequently left unexplored. Hence, the lack of confidence in reported conclusions is understandable. A reflection of this scepticism towards the flora of normative poverty measures is the extensive use of the controversial head count statistic in normative discussions of the problem of poverty.

But are we doomed to live with arbitrariness in normative poverty measurement?<sup>3</sup> I do not think so, and I shall claim that a lot of the arbitrariness referred to in the

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<sup>1</sup> For their comments on earlier versions of this paper, I am grateful to Anthony Atkinson, Sudhir Anand, Bernt Christian Brun, Rune Jansen Hagen, Jonathan Murdoch, Ottar Mæstad, Agnar Sandmo, Amartya Sen, Svein Aage Aanes, and participants at the Nordic Workshop on Public Economics and Applied Welfare in Oslo (August 1993), the Winter Meeting of the Econometric Society in Vienna (January 1994), and at seminars at the University of Bergen and Norwegian School of Economics and Business Administration.

<sup>2</sup> The reader should keep in mind that the aim of this paper is to discuss *normative* poverty measurement in contrast to descriptive poverty measurement. The distinction is important, though not always well understood in the poverty measurement literature. See Murdoch (1994) for a recent contribution to the theory of descriptive poverty measurement.

<sup>3</sup> Foster (1984) seems inclined to think so: "Hence, one conclusion of this survey is that the choice of a *single* poverty measure involves a certain degree of arbitrariness" (p. 242).

poverty measurement literature is illusory. The distinctions between normative poverty measures are usually not arbitrary, but rather related to different responses to some unavoidable normative and factual choices faced in poverty analyses. The arbitrariness only enters the stage when these choices are concealed in the aggregation procedure. This may also explain why the head count measure still is extensively used; when we count the number of poor people we are (hopefully) aware of the normative choices implicit in the procedure. And many people find the head count procedure, despite its defects, more attractive than an apparently arbitrary and complex alternative approach (even though the latter satisfies some appealing axioms).<sup>4</sup>

My aim in this essay is to present an approach to normative poverty measurement which makes the necessary normative choices more *explicit*. Furthermore, the proposed approach also presents the normative choices in a framework which is intuitively appealing, and thereby makes it easier for people to respond to these choices in a way that is in compliance with their normative position on this issue. Nevertheless, some noise will still prevail in the measurement of poverty and some readers may find this fact disturbing. I do not, because I doubt that the nature of the problem permits us to defend anything else than a crude normative position.<sup>5</sup> However, this is not the same as saying that any crude indicator of poverty is reasonable, but the acceptance of a crude indicator as our aim should allow us to make practical choices where necessary.

Various interpretations of the concept of individual poverty are possible, and I have underlined elsewhere the relevance of normative reasoning in a clarification of this issue.<sup>6</sup> Basically, we may relate the concept of poverty to the problem of suffering (that may be captured by the idea of basic needs) and to the problem of unfairness (that may be captured by the idea of a reasonable share of the resources in society),

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<sup>4</sup> See also Foster (1994): "Characterizations may indeed help in constructing and choosing among indexes; but if the choice is between an intuitive index without an axiomatic characterization and another index whose only merit is an irrelevant characterization, the decision is clear. A researcher's time might be better spent identifying important aspects of the phenomenon to be measured and showing how a particular index captures them, rather than erecting axiomatic structures around measures that will never be used" (p. 367-368).

<sup>5</sup> On this issue, see also Sen (1992), p. 48-49.

<sup>6</sup> See Tungodden (1994a).

and these two aspects are the underlying foundation of the discussion in this essay. Hence, divergent normative positions reflect disagreement about the relative importance of these two aspects of poverty.

In section 2, I consider some of the current problems in the poverty measurement literature. The issue of evaluative space is discussed in brief in section 3, and in section 4, the basic framework of the suggested approach is outlined. In section 5 and 6, I apply the new framework in order to achieve a complete cardinalization of the poverty problem, and, moreover, discuss the issue of ordinal poverty comparison.

## 2. Problems

I shall in this section discuss in brief some of the substantial problems in the existing literature on poverty measurement. (At the moment I disregard the choice of evaluative space, an issue I return to in section 3.) The poverty measurement literature is extensive, and my aim is not at all to present an exhaustive survey.<sup>7</sup> Thus, the discussion is confined to the two main contributions, the Sen-measure and the class of Foster-measures - henceforth  $P^S$  and  $P^F$ .<sup>8</sup>

Conventionally, poverty measures have been defined on ordered versions of the actual income vector in a society, i.e. income vectors where  $y_1 \leq \dots \leq y_i \leq \dots \leq y_N$ , and  $N$  is the total population.<sup>9</sup> For this framework, we may write  $P^S$  and  $P^F$  as follows:

$$(1) \quad P^S = \frac{2}{(Q+1)Nz^*} \sum_{i=1}^Q (z^* - y_i)(Q+1-i),$$

$$(2) \quad P^F = \frac{1}{N[z^*]^\alpha} \sum_{i=1}^Q (z^* - y_i)^\alpha,$$

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<sup>7</sup> See Sen (1981) and Foster (1984).

<sup>8</sup> However, the problems discussed are also present in other well-known poverty measures, as for example Watts (1968) and Chakravarty (1983). For a discussion of the problem of subgroup consistency in poverty measurement, see Tungodden (1994b).

<sup>9</sup> See paragraph 4.1, where I elaborate on the underlying foundation of this assumption.

where  $z^*$ ,  $y_i$ ,  $Q$ , and  $\alpha$  are respectively the income poverty line, the income of individual  $i$ , the number of poor people, and a normative parameter. It is easily seen from (1) and (2) that if we introduce the notational simplifications  $H = \frac{Q}{N}$  (the head count ratio) and  $I = \sum_{i=1}^Q \frac{(z^* - y_i)}{z^* Q}$  (the relative income gap), then an equal distribution of income in the poor part of the population implies that  $P^S = HI$  and  $P^F = \frac{I^\alpha}{N}$ .

## 2.1 Lack of focus

It has been considered uncontroversial to claim that a normative poverty measure should be invariant to changes in the income of the nonpoor part of the population. The motivation has been to separate considerations about the badness of aggregate poverty from a discussion of the burden of poverty in a society.<sup>10</sup> Both aspects may be of importance in an overall evaluation of the poverty problem, but they are two distinct questions which certainly should be analysed separately. The discussion in this essay shall be in line with the traditional framework of poverty measurement on this issue, and concentrate on the construction of a normative poverty measure that reports on the badness that follows from the problem of poverty in society. Moreover - for reasons that become evident in section 3 - I shall ignore the question about whether there are important physical and psychological interconnections between the nonpoor and the poor part of the population that may make it controversial to claim that a normative poverty measure ought to be invariant to changes in the income of the nonpoor part of the population. There is, however, a closely related invariance requirement that poses more substantial problems for the conventional framework, and I now turn to a discussion of that issue.

Less attention has been paid to how changes in the population size should fit into the picture of normative poverty measurement. Traditionally, normative poverty measures are sensitive to the size of the nonpoor part of the population, because they are defined as *per-capita* measures.<sup>11</sup> Hence, it follows from these measures that the

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<sup>10</sup> Sen (1981), p. 186.

<sup>11</sup> Foster (1984), p. 232.

problem of poverty is less severe if a nonpoor person is added to the population. This is easily seen if we rewrite (1) and (2) in the following way:

$$(3) \quad P^S = \frac{1}{N} [(QI) + Q(1-I)G_p],$$

$$(4) \quad P_{\alpha=2}^F = \frac{1}{N} [(QI)^2 + Q(1-I)C_p],$$

where  $G_p$  and  $C_p$  are inequality measures on the income distribution in the poor part of the population (respectively the Gini coefficient and the squared coefficient of variation).<sup>12</sup> Both poverty measures consist of two parts inside the brackets: The first part may be interpreted as the badness related to the overall lack of income in the poor population, where income is assumed equally distributed among the poor. Obviously, this effect depends on the number of poor people  $Q$  and the relative income gap  $I$ . However, income is usually not equally distributed and the second part takes this latter aspect into account. The badness that follows from a skewed distribution among the poor (which is reflected in the inequality index) is assumed to be more severe the larger the number of poor people in the population and the larger the relative income gap. However, the size of the nonpoor part of the population is irrelevant for both these aspects, and hence a change in the number of nonpoor people will only affect the normative consideration of the poverty problem via the fraction outside the brackets in both (3) and (4).

Characterising the problem of poverty in per-capita terms introduces some questionable normative properties in a poverty analysis. According to this view, the badness from aggregate poverty may more or less be alleviated by population growth in the nonpoor part of the population. But this claim is in some sense clearly false. The same number of people will be poor and they will be just as poor as they were before the population grew. Hence, the extent of suffering will surely be unchanged, and it may seem like the per-capita approach lacks foundation in situations that involve changes in the population size.

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<sup>12</sup> See Sen (1976), p. 224 for a detailed discussion of the Gini-measure and Foster et.al (1984), p. 762 for a discussion of the squared coefficient of variation. It is (for the sake of simplicity) assumed in (4) that  $\alpha = 2$ . I shall return to a discussion of this assumption in paragraph 2.4.

Moreover, the normative implications of changes in the number of poor people are even more disturbing. If another poor person is added into society, then - *ceteris paribus* - the extent of suffering increases. But this is not necessarily perceived as an aggravation of the poverty problem within the per-capita framework. Another poor person increases the total population  $N$  as well, and the second effect may dominate the direct effect (which is to increase the extent of suffering). Thus, an additional poor person may within this framework reduce the problem of poverty. To illustrate: The problem of poverty decreases according to  $P^F$  as long as we add *poor* people with income above the average income into a society where everyone is poor.<sup>13</sup> Hence, the need for a revision of the traditional approach to normative poverty measurement should be evident.

The empirical importance of this issue is exposed in a recent publication on human development and structural adjustment in India.<sup>14</sup> The poverty alleviation statistic in this report reveals that the rate of decline in the head-count ratio (which is a per-capita measure) in rural segments was around 0.6% per year between 1970-71 and 1983. However, because of population growth, the number of rural poor people *increased* from 206 million to 214 million over this period. Hence, we may ask what normative importance we should attach in this case to the decline in the head-count ratio (the problem of the head-count ratio being insensitive to changes in income levels is not at issue here). On the contrary, it is not difficult to find normative support for the claim that the aggregate poverty problem of India has been aggravated by the fact that the number of poor people in the rural segments increased by 8 million people.

The per-capita approach indicates something about the badness of the situation when the suffering itself is equally distributed (as is illustrated in (3) and (4)). And one may argue that it is possible to find normative support for this kind of reasoning by entering into some kind of original position, where the normative basis of the analysis is formed as a choice behind a veil of ignorance.<sup>15</sup> However, this line of reasoning

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<sup>13</sup> The case is only slightly different if we have both poor and nonpoor in a society. Alike examples may also be given for  $P^S$ .

<sup>14</sup> Parikh and Sudarshan (1993).

<sup>15</sup> See Harsanyi (1955) and Rawls (1971, 1993) for a discussion of this social choice mechanism.

faces some deep problems with respect to the issue of population growth, and, thus, I doubt that the per-capita approach may be defended by such a move.<sup>16</sup> But be that as it may, the approach proposed in this essay may either be perceived as a different response to the choice presented in the original position or as a separation of *one* important element in the evaluation of a society. This latter interpretation seems to me to be rather appealing: By normative poverty measurement we aim to give a normative characterisation of the badness of a problem, namely that the well-being of some people is below a stipulated minimum level, and in the characterisation of this problem we avoid a further question about how to weigh the problem of poverty against the fact that some people in society may enjoy a high level of well-being.<sup>17</sup>

## *2.2 Discontinuity at the poverty line*

There is an extensive debate in the poverty measurement literature about whether we ought to assign any importance to the fact that people cross the poverty line.<sup>18</sup> It is for example claimed by Sen that " ...if a transfer [from a non-poor to a poor] drags a person from above to below that threshold while reducing the income gap of a poorer person, it is not obvious that the overall poverty measure must invariably be expected to decline. The poverty line has some absolute significance and to cross it is a change of some importance".<sup>19</sup> Such a view is reflected in  $P^S$ , which experiences an abrupt change when the size of the poor population changes. On the other hand, no importance at all is assigned to crossing the poverty line in  $P^F$ ; this class of poverty measures is smooth at the poverty line. Various arguments on this issue may be considered, but I shall not elaborate on their validity here. The problem of both  $P^S$  and  $P^F$ , as I see it, is that they do not leave this normative question open to discussion; an answer is already implicit in the proposed measures. Thus, our aim shall be to present a framework for analysis of poverty which provides more flexibility on this complex issue.

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<sup>16</sup> For a further discussion of this issue, see Parfit (1984).

<sup>17</sup> See also Sen (1982), p. 159, for a discussion of the distinction between normative indicators and comprehensive social welfare judgements.

<sup>18</sup> See for example Lipton and Ravallion (1993), p. 24, Foster and Shorrocks (1991), p. 690, and Thon (1979), p. 438.

<sup>19</sup> Sen (1984), p. 342.



### 2.3 Normalization and Information

The normalization procedure conventionally used in normative poverty measurement weakens the informative force of these measures. Normative poverty measures are normalized such that  $P \in [0,1]$ , where  $P = 0$  when no one is poor in a society and  $P = 1$  when no one in the society has any income. The problem, within this framework, is to have a deep cardinal understanding of for example  $P = 0.62$  or  $dP = 0.1$ , since we are unable to transform these figures into any counterpart in reality. Hence, if we want to "improve the effectiveness of communication" in normative poverty analysis, we should strive for a more intuitively appealing presentation of normative conclusions on the problem of poverty.<sup>20</sup> Otherwise, it may easily be the case that appealing descriptive poverty measures (such as the head-count measure) also are used as the basis for normative conclusions.

### 2.4 The Problematic Parameter

The Sen-measure (as presented in (1)) leaves no normative flexibility to the user; the approach gives a specific functional form for normative measurement of poverty. However, as Kakwani points out, the Sen-measure may be seen as a member of the following class of poverty measures:<sup>21</sup>

$$(5) \quad P^{S^*} = \frac{Q}{\left(\sum_{i=1}^Q i^\beta\right) N z^*} \sum_{i=1}^Q (z^* - y_i)(Q+1-i)^\beta,$$

where  $\beta$  is the normative choice parameter. (5) becomes the Sen-measure when  $\beta = 1$ . Hence, the feasible normative base of the approach proposed by Sen is extended by focusing on the class of poverty measures proposed by Kakwani. Likewise, the normative choice parameter  $\alpha$  provides the class of Foster-measures with some flexibility (as is seen from (2)).

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<sup>20</sup> Atkinson (1987), p. 762. See also Foster (1994).

<sup>21</sup> Kakwani (1980).

The problem, though, is that the parameter of both  $P^F$  and  $P^S$  presents the normative choice within an *ordinal* framework. The only insight attained from, for example, knowing that  $\alpha > \alpha^*$ , is that the normative view reflected in  $\alpha$  is more averse to inequality than the normative view reflected in  $\alpha^*$ .<sup>22</sup> Thus, in the absence of any reasonable cardinal interpretation, it is hard to have any strong opinion about the size of the parameter. But these parameters have a decisive effect on the conclusions of normative poverty measurement.  $P_{\alpha=3,5}^F$  and  $P_{\alpha=10}^F$  satisfy the same axioms (and, hence, we are indifferent between them in that respect), but they will certainly inform us differently about the poverty problem. Which shall we choose? No easy answer is at hand, and most people probably find it hard to state the alternative that is closest to their view on this issue.

Consequently, it is urgent to provide a cardinal understanding of the important normative choice faced in poverty measurement. In order to establish acceptance for a cardinalization of the poverty problem, the framework of the analysis ought to be outlined in a way which makes it easy to evaluate whether one actually agree or disagree with the reported normative characterization of the poverty problem. Otherwise, endorsement (or disagreement) could easily be replaced by scepticism and doubt. The latter is probably a common response to the current framework of applied poverty measurement, where *without* any further reasoning the smallest integer satisfying some proposed transfer criteria is used as the normative parameter.<sup>23</sup> But why should we choose the smallest integer? *Any* larger real number seems equally appropriate as long as we do not provide any further support for our choice, and the importance of normative conclusions reached from this kind of analysis may certainly be questioned.

## 2.5 Summing Up

The approach outlined in the rest of this essay deals with four problems in the current poverty measurement literature: First, it suggests a more reasonable approach to the measurement of poverty in cases where population size differs. This is an extremely

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<sup>22</sup> Here, I assume that the poverty measures in question satisfy the axioms that are conventionally required in the literature.

<sup>23</sup> Ravallion (1994) is a recent example.

important topic in order to make empirical poverty measurement relevant for practitioners. Population size plays an important role in almost every case of interest, and, thus, the per-capita approach is of limited relevance. Second, the suggested approach provides a reasonable understanding of the property of discontinuity at the poverty line, and, moreover, allows for flexibility on this issue. Third, it makes cardinalization of poverty measurement more relevant, by introducing a framework which reports on the problem of poverty in an intuitively appealing way. And fourth, it provides a cardinal understanding of the parameter values in normative poverty measurement.

### 3. Interpersonal Comparisons of Well-Being

The problem of interpersonal comparisons of well-being is extensively discussed in social choice theory.<sup>24</sup> This issue, though, is more or less neglected in the poverty measurement literature, where the aim has been to report on the problem of poverty on the basis of the income distribution in a society.<sup>25</sup> The strategy is in some sense reasonable in the light of the limited access to information that is often faced in empirical poverty analysis, but there are important topics that may be neglected by the choice of such a strategy. Moreover, to choose the space of income as the evaluative space in poverty measurement may also contribute to mingle some substantial normative and factual issues. Thus, I shall in the following discuss poverty measurement as the task of aggregating well-being distributions, and, hence, the issue of interpersonal comparisons turns out to be of importance.

The message of recent social choice theory is (roughly speaking) that we have to choose between ordinal or cardinal interpersonal comparability of well-being (if we do not reject the possibility of making interpersonal comparisons), and, hence, the possibility of acquiring a normative cardinalization of the poverty problem seems to be rather limited when we choose to work with well-being distributions.<sup>26</sup> However, I

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<sup>24</sup> See Sen (1982) for a discussion of various issues in this literature.

<sup>25</sup> A combination of these two approaches is present in Sen (1976).

<sup>26</sup> Ordinal interpersonal comparability allows transformations of the well-being function that preserve equalities between levels of different individuals' well-being functions. Sen (1976) applies the Borda Ranking Rule on this framework, and thereby acquires a cardinalization of the problem of poverty. Cardinal interpersonal comparability allows transformations of the well-being function that preserve equalities between units of different individual's well-being functions. The framework of Atkinson

shall claim that social choice theory has overlooked an essential element in the discussion of various feasible informational frameworks.<sup>27</sup> Social choice theory has explored the link between informational frameworks and social choice criteria by assuming that the same type of interpersonal comparisons of well-being is possible throughout the society. Hence, if you find it reasonable to state that you enjoy a higher level of well-being than the victims of the civil war in Rwanda, then (according to the reasoning in this literature) you also ought to be able to state whether you enjoy a higher or lower level of well-being than your neighbour next door. But why should you? I perceive it as rather apparent that I am unable to do interpersonal comparisons of well-being in the local community where I live, but I will certainly not reject the possibility of making an interpersonal comparison of my well-being and the well-being of the victims of the civil war of Rwanda. Moreover, I assume, as I return to shortly, that there are relevant scales which can be used in order to do interpersonal comparisons of well-being among people that we characterize as poor.

Hence, I shall make the following two assumptions about the informational basis of poverty measurement.

**Assumption 1 (Identification):** *For every individual  $i$  it is possible to decide whether  $w_i \in [0, z]$ , where  $w_i$  is the well-being of individual  $i$  and  $z$  is the poverty line.*

**Assumption 2 (Interpersonal Comparisons):** *The well-being of the poor population is defined up to the identity transformation of the well-being tuple.*

It follows from Assumption 2 that the informational invariance requirement in this analysis is trivial.<sup>28</sup> The reason for this is simply that I assume that it is possible to

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(1970) may indicate a feasible approach to the cardinalization of poverty within such a framework. But, as I see it, both these informational frameworks are too restrictive in a discussion of the problem of poverty, and, thus, they contribute to an unreasonable limitation of the feasible normative positions that one may take up in this context. Of course, social choice theory also acknowledges the possibility of ratio and absolute measurability, but usually these alternatives are - for good reasons - viewed as too extreme assumptions to be imposed on the overall well-being tuple of society. For a comprehensive discussion of interpersonal comparability in social choice theory, see Roberts (1980).

<sup>27</sup> See also the discussion in Tungodden (1994c).

<sup>28</sup> The poverty measures discussed in the sections 5 and 6 may in fact allow a stricter invariance requirement (to wit ratio measurability), but (as I see it) there is nothing gained by considering this less demanding transformation assumption.

construct a relevant absolute scale for measuring the well-being level of people in the poor part of the population. In fact, such a scale is implicit in the determination of the poverty line, and, thus, the assumption does not impose any additional informational requirement on the analysis. Various possibilities exist; the scale may for example be defined as the intake of nutrition, the body mass index, life expectancy, or an index that combines various aspects of intrinsic importance.<sup>29</sup> More important, though, is the fact that Assumption 2 does not imply *anything* about interpersonal comparisons between non-poor individuals. Thus, one may claim that it is impossible to make interpersonal comparisons of well-being in the non-poor part of the population and still support a cardinalization of normative poverty measurement. Hence, the informational requirement underlying the class of poverty measures proposed in this essay is far less restrictive than what is the case in the traditional framework of normative inequality measurement.<sup>30</sup>

It is useful, in a discussion of poverty, to define the lowest possible level of well-being. If we for example adopt the body mass index as the scale of well-being (which is the ratio of a person's weight to the square of her height), then individual  $i$  is at the lower limit of survival if  $\underline{w}_i = 12$ .<sup>31</sup> However, I shall make a notational simplification, which contributes to make the outlined approach comparable to the conventional discussion of poverty measurement, and define  $\underline{w} = 0$ . (Accordingly, readers that are not convinced about the importance of measuring poverty in the space of well-being, may in the following simply interpret well-being as income. The reported results should still be of interest.) Hence, we may assume that the absolute well-being scale is represented by nonnegative reals  $R_0$ , i.e. the actual well-being vector in society  $S$  -  $W^S$  - is drawn from the set  $W := \bigcup_{N=1}^{\infty} R_0^N$ . Moreover, it is convenient to define  $P = 0$  when there is no poverty in the society and more generally  $P \in R_0$ , so that  $P^A > P^B$  reflects that the poverty problem is viewed as more severe in society  $A$  than in society  $B$ .

Finally, I assume that the location of the poverty line  $z$  in the well-being space is predetermined. (If we adopt the body mass index, then, by way of illustration,  $z = 17$

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<sup>29</sup> See Dasgupta (1993) for a discussion of some of these alternatives.

<sup>30</sup> See, for example, Atkinson (1970).

<sup>31</sup> See Dasgupta (1993), p. 414.

defines people as poor if they are undernourished.) The problem of poverty measurement may then be defined in two steps:<sup>32</sup> First, the *identification mapping*  $I: R_0^N \rightarrow R_0^Q$  defines the poverty vector  $W_p^S$  in society  $S$  as follows:  $W_p^S(z, W^S) := \{w_i \in W^S | w_i \leq z\}$ . Based on this identification mapping, the *aggregation mapping*  $P: R_0^Q \rightarrow R_0$  assigns a single value to any poverty vector  $W_p^S$ . The aim of the following sections is to impose structure on the aggregation mapping, and I now turn to a discussion of a set of basic axioms that constitutes a reasonable foundation of normative poverty measurement.

#### 4. Basic Axioms

Many of the axioms outlined in this section are well-known in the poverty measurement literature, but they are usually defined in the income space. I redefine them in the space of well-being, and - though the change may seem rather trivial - there are some important implications that follow from this change of evaluative space. Moreover, the reformulation contributes to underline the distinction between *normative* and *factual* considerations in poverty measurement, which is important in order to clarify the normative foundation of the outlined framework.

The basic axioms may be separated into two main categories. Initially, I consider the axioms that are concerned with changes in people's well-being, and, then, (in the second paragraph of the section) I extend the framework to also cover cases where there is a change in population size.

##### 4.1 Changes in individual well-being

I introduce the notational simplification  $CW^{A \wedge B} = (W^A \cup W^B) - (W^A \cap W^B)$ , i.e. the subset  $CW^{A \wedge B}$  reflects the difference in the well-being tuples of states  $A$  and  $B$ . Moreover, let  $w_i^S$  refer to the well-being level of individual  $i$  in state  $S$ , i.e.  $w_i^A = w_i^B$  should be interpreted as a particular individual  $i$  having the same well-being level in states  $A$  and  $B$ .

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<sup>32</sup> This two-step view on poverty measurement was introduced by Sen (1976).

**AXIOM A (The Anonymity Axiom):**

a) For any  $i = k, l$  &  $S = A, B$ :  $[w_k^A = w_l^B, w_l^B = w_k^A$  &  $w_{-(k,l)}^A = w_{-(k,l)}^B] \rightarrow P(W_p^A) = P(W_p^B)$ .

b) For any  $i = k, l$  &  $S = A, B$ :  $[w_k^A = w_l^B$  &  $w_k \notin W^B; w_l \notin W^A$  &  $w_{-k}^A = w_{-l}^B] \rightarrow P(W_p^A) = P(W_p^B)$ .

The first part of Axiom A is a well-known assumption in a great deal of modern welfare economics, and it will also be implicit in the construction of the remaining axioms.<sup>33</sup> It claims that a normative poverty measure should be invariant to a permutation of the well-being tuple in a society. The second part extends this to include cases where people in society are replaced by new poor people with the same level of well-being. Thus, it follows from Axiom A that it is irrelevant in a normative evaluation of the poverty problem whether person  $k$  or person  $l$  is the worse off person, i.e., the aggregate poverty measure should reflect an impartial evaluation of the poverty problem. Hence, we may in the following work with ordered versions of the well-being vector, i.e.  $W^S = \{w_1^S \leq \dots \leq w_i^S \leq \dots \leq w_N^S\}, \forall S$ . However, a similar axiom stated in the income space (as is common in the poverty measurement literature) is more questionable. It presupposes that everyone has the same ability to convert income into something of intrinsic importance.

The next axiom is a straightforward reformulation of the monotonicity axiom proposed by Sen.<sup>34</sup>

**AXIOM M1 (The First Monotonicity Axiom):**

For any  $i$  &  $S = A, B$ :  $[w_i^A < z, w_i^B > w_i^A$  &  $\{w_i^A, w_i^B\} = CW^{A \cap B}] \rightarrow P(W_p^A) > P(W_p^B)$ .

Thus - *ceteris paribus* - a(n) reduction (increase) in the well-being of a person below the poverty line aggravates (assuages) the problem of poverty according to Axiom M1. Hence, by imposing this axiom on the aggregation mapping, we reject head count as an appropriate normative poverty measure. In this framework, it matters for

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<sup>33</sup> See Sen (1982) for a discussion of this axiom in a more general context.

<sup>34</sup> Sen (1976), p. 219.

the normative conclusion whether people are immensely deprived or just below the poverty line. A reformulation of Axiom M1 in the income space would only be uncontroversial if there in general is a monotonic relationship between well-being and income.

**AXIOM F1 (The First Focus Axiom):**

*For any  $S = A, B$ :  $[W_p^A = W_p^B \ \& \ N^A = N^B] \rightarrow P(W_p^A) = P(W_p^B)$ .*

The content of Axiom F1 has been discussed to some length in paragraph 2.1, and the normative implications of this axiom are widely accepted in the poverty measurement literature. A normative poverty measure ought to be invariant to changes in the well-being of nonpoor individuals, because it aims to characterize the badness that follows from the destitution experienced by the poor part of the population.<sup>35</sup> However, a corresponding axiom defined in the space of income may be more debatable, and its relevance depends on the reasonableness of the factual claim that the destitution of the poor part of the population is independent of the income level of the nonpoor part of the population.

**AXIOM P (The Priority Axiom):**

*For any  $i = k, l \ \& \ S = A, B$ :  $[z \geq w_k^A > w_l^B > w_l^A \ \& \ (w_k^B - w_k^A) = (w_l^A - w_l^B) \ \& \ \{w_{k,l}^A, w_{k,l}^B\} = CW^{A \cap B}] \rightarrow P(W_p^A) > P(W_p^B)$ .*

Axiom P makes the claim that an increase (decrease) in the well-being of a poor individual which remains poor, ought to reduce (increase) the aggregate poverty measure more the poorer the individual in question is at the outset. In a discussion of this claim, the distinction between well-being and income is of vital importance. One may argue in favour of a transfer principle defined on the income space (as, for example, a version of the Pigou-Dalton transfer principle), and still reject Axiom P. A transfer principle defined on the income space may only be concerned with the factual

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<sup>35</sup> Axiom F1 may be somewhat controversial when we take into account the issue of unfairness in a discussion of the badness of the poverty problem. However, I neglect this complication here (but see Tungodden (1994a,d)), and presume that the elements of unfairness related to Axiom F1 are captured by the predetermined poverty line.



consideration that the well-being function is concave with respect to income. Axiom P, on the other hand, is concerned with our normative judgement related to the distribution of suffering, and it argues that a reduction in suffering is most valuable at low levels of well-being. Of course, these two aspects may often work in the same direction, but they are nevertheless judgements of very different kinds. In my view, we ought to accept Axiom P, but the proposed approach may easily be redefined such that the normative poverty measure is insensitive to inequality in well-being among the poor.

**AXIOM S (The Separability Axiom):**

*For any  $i = k, l$  &  $S = A, B, C, D$ :  $[(w_k^A - w_k^B) = (w_i^C - w_i^D)]$  &  $\{w_k^A, w_k^B\} = CW^{A \wedge B}$  &  $\{w_i^C, w_i^D\} = CW^{C \wedge D} \rightarrow \{P(W_p^A) - P(W_p^B)\} = \{P(W_p^C) - P(W_p^D)\}$ .*

By imposing Axiom S on normative poverty measurement, we take up the normative position that the badness that follows from a person having a low level of well-being is independent of the extent of poverty in the society in question. However, this is not to claim separability in the underlying foundation of the well-being tuple. There is certainly force in the argument that the well-being level of a person depends on the well-being level of people in his or her reference group (as Sen persuasively has pointed out), but that is mainly a factual claim which should not be intermingled with the normative statement embodied in Axiom S.<sup>36</sup> What we are concerned with here is the normative evaluation of the poverty problem after all physical (as well as psychological) interconnections have been taken into account.

**4.2 Changes in population size**

Traditionally, less attention has been paid to how changes in the population size ought to affect the reported poverty figures. However, we are frequently concerned with comparisons among societies differing in population size, and, thus, in order to make a normative poverty measure more operative, I shall establish a normative framework

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<sup>36</sup> See Sen (1973) and Broome (1991) for a general discussion of interconnections in the well-being tuple, and Tungodden (1994b) for a discussion of some of the implications of this aspect in poverty measurement.

for cases with a variable number of people. In this context, the following two axioms should be rather uncontroversial:

**AXIOM F2 (The Second Focus Axiom):**<sup>37</sup>

For any  $S = A, B$ :  $W_p^A = W_p^B \rightarrow P(W_p^A) = P(W_p^B)$ .

**AXIOM M2 (The Second Monotonicity Axiom):**

For any  $i$  &  $S = A, B$ :  $[w_i^B < z \ \& \ \{w_i^B\} = CW^{A \wedge B}] \rightarrow P(W_p^B) > P(W_p^A)$ .

The intention underlying the population axioms has been elaborated in earlier sections: We ought to avoid a *hybrid* poverty measure which mingles a discussion about the badness of poverty with the distinct (though important) question about the burden of poverty in a society. Hence, the poverty problem is considered to be aggravated when - *ceteris paribus* - the number of poor people increases in a society (Axiom M2), but it ought to be considered as independent of changes in the size of the nonpoor part of the population (Axiom F1).

## 5. A Class of Poverty Measures

The basic axioms discussed in section 4 clarify some substantial issues in normative measurement of poverty, but nevertheless, the normative framework characterized by these axioms innate a considerable amount of incompleteness in the evaluation of the problem of poverty. If we aim for a complete cardinalization of our normative position on this question, then we have to choose a particular functional form (among all the candidates which satisfy these properties) as the poverty measure. This step lacks foundation in current poverty measurement literature, and, thus, I shall in the following outline a reasonable framework for this choice.

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<sup>37</sup> Axiom F2 makes Axiom F1 superfluous in a characterization of the normative foundation of the class of poverty measures proposed in this paper.

## 5.1 An example

Compare a society  $A$  where we have  $Q^A$  poor people with the same level of well-being (i.e.  $w_1^A = \dots = w_{Q^A}^A < z$ ) with a reference society  $B$  where there are  $Q^B$  poor people who have the lowest possible level of well-being  $\underline{w}$  (i.e.  $w_1^B = \dots = w_{Q^B}^B = \underline{w}$ ).

Obviously, whether we view aggregate poverty as worse in  $A$  than in  $B$  depends on the number of poor people in respectively  $A$  and  $B$  and the intensity of poverty in  $A$ . It goes without saying, though, that if  $w_i^A = \underline{w}$ , then society  $A$  and  $B$  have the same aggregate poverty when  $Q^A = Q^B$ . But what is the case when  $\underline{w} < w_i^A < z$ ? Assume that you would argue that the poverty problem in society  $A$  and  $B$  is the same if  $Q^B = 50$ . (It is for our purpose unnecessary to specify the number of poor people in  $A$ .) Let us now introduce a society  $C$  with the same number of poor people as in  $A$ . Neither in society  $C$  is there any inequality among the poor (i.e.  $w_1^C = \dots = w_{Q^C}^C < w_1^A = \dots = w_{Q^A}^A < z$ ). Assume that in this case you claim that  $Q^B = 100$  would make you say that society  $B$  and  $C$  tie with respect to aggregate poverty.

We have now moved closer to an informative representation of your normative position on the problem of poverty. Let me illustrate: If fifty people with the lowest possible level of well-being  $\underline{w}$  are added to society  $A$  (and let  $A^+$  denote the society after this change), then you would have to claim - if you accept the basic axioms of section 4 - that the poverty problem of  $A^+$  and  $C$  is equally bad. Hence, the difference in severity in the poverty problem of  $A$  and  $C$  may be described by reference to the hypothetical society  $B$ . Moreover, it also makes sense within this framework to say that you view the poverty problem in society  $C$  as twice as bad as the poverty problem in society  $A$ . (If the population in society  $A$  were duplicated, then the poverty problem would be equally bad in society  $(A + A)$  and  $C$ .) Shortly, I shall apply this line of reasoning in a discussion of the problem of selecting functional forms, but for that purpose some new concepts are introduced.

## 5.2 New concepts

We may call an individual's contribution to the aggregate problem of poverty for an individual's *effective poverty* ( $ep_i^s$ ). Hence, the difference between effective poverty

$(ep_i^S)$  and the poverty gap  $(z - w_i^S)$  of individual  $i$  in society  $S$  is that whereas the former refers to the importance attached to the level of well-being of individual  $i$  in the aggregation mapping, the latter is a pure description of the poverty problem of individual  $i$ . Consequently, contrary to the poverty gap of an individual, an individual's effective poverty is related to a specific normative view on the problem of poverty.

Moreover, let the term *reference poor* denote an individual with the lowest possible level of well-being  $\underline{w}$ . As indicated in paragraph 5.1, we may define aggregate poverty in units of reference poors, and, hence, the following definition of effective poverty may be stated:

**Definition 1 (Effective Poverty):** *Individual  $i$ 's effective poverty is the number of reference poors which has to be added to the population when individual  $i$  is withdrawn from the population in order to maintain the same level of aggregate poverty.*

I shall close this section by outlining the class of poverty measures that we ought to pay attention to in our discussion of a complete cardinalization of normative poverty measurement, and, then, in section 6, I shall apply the intuition underlying Definition 1 to support the choice of a particular normative position.

### 5.3 A Class of Poverty Measures

We may, based on the basic axioms already outlined, narrow the feasible area of the aggregation mapping. First, it follows from Definition 1 that:

$$(6) \quad ep_i^S(w_i^S = \underline{w}) = 1, \forall i, S.$$

Moreover, according to Axiom F2:

$$(7) \quad ep_i^S(w_i^S) = 0, \forall w_i^S > z \ \& \ \forall S.$$

Axiom S and Definition 1 imply that  $P(W_p^S) = F(\sum_{i=1}^{Q^S} ep_i^S)$ . An appealing normalization is then achieved by choosing to work with the following aggregation mapping:

$$(8) \quad P(W_p^S) \equiv \sum_{i=1}^{Q^S} ep_i^S.$$

(8) accentuates the appealing structure of this framework: Analogous to a head count procedure, we just add up the assigned number of reference poors for each poor individual in society. Hence, the normative evaluation of the poverty problem is illustrated by reference to a particular hypothetical society. By way of illustration,  $P_{NX}(W_p^A) = 80.000$  reports that from the normative position  $NX$ , the poverty problem of society  $A$  is considered as equally bad as in a (hypothetical) society with 80.000 poor people whom all have the lowest possible level of well-being. Moreover, if  $P_{NX}(W_p^{A^*}) = 120.000$  reports the situation of society  $A$  following, for example, a change in policy, then - according to the normative position  $NX$  - the policy change has aggravated the poverty problem to the same extent as a (hypothetical) policy that has a consequence that 40.000 non-poor people end up with the lowest possible level of well-being. Hence, the outlined framework provides us with an intuitive cardinalization of normative poverty measurement.

An objection to this framework, though, may be that it does not provide us with any information about the *intensity of poverty* within a society. If it is reported that  $P_{NX}(W_p^A) = 80.000$ , then it is impossible to know whether this poverty figure reflects a society where 80.000 people have the lowest possible level of well-being or a society with a much larger number less deprived poor people. However, this information may easily be retrieved by reporting on the *average effective poverty* among the poor, which straightforwardly may be defined as follows:  $\bar{P}(W_p^S) = \frac{1}{Q^S} \sum_{i=1}^{Q^S} ep_i^S, \forall S$ . Hence,  $\bar{P}(W_p^A) = 1$  reflects that everyone in the poor part of the population in society  $A$  has the lowest possible level of well-being.

The basic axioms impose some structure on the task of assigning reference points to various levels of well-being. First, according to Axiom A and Axiom S, the number of reference points that is to be assigned to a level of well-being should be independent of both the rest of the well-being tuple and of the position of any particular individual in society. Hence, it follows that:

$$(9) \quad ep_i^s(w_i^s) = h(w_i^s, z), \quad \forall i, S.$$

Moreover, if we assume that  $\lim_{w_i^s \rightarrow \underline{w}^+} h(w_i^s, z) = 1$ , then it follows from Axiom P that  $h(w_i^s, z)$  is a continuous function of  $w_i^s$  on  $W_p^s$  (though not necessarily on  $W^s$ , an issue I return to shortly).<sup>38</sup> Nothing of importance is lost by assuming that  $h(w_i^s, z)$  is a differentiable function in the same region, and, hence, we may state that Axiom M1 and Axiom P imply that:

$$(10) \quad \frac{\partial h}{\partial w_i^s} < 0, \quad \forall i, S.$$

$$(11) \quad \frac{\partial^2 h}{\partial (w_i^s)^2} > 0, \quad \forall i, S.$$

Whether  $h(w_i^s, z)$  should be defined as continuously differentiable on  $W^s$  depends on the normative importance assigned to the fact that people cross the poverty line. We may formalize this normative choice by introducing a *poverty line parameter*  $d$  in the following equation:<sup>39</sup>

$$(12) \quad ep_i^s(w_i^s = z) = h(z, z) \equiv d, \quad d \in [0, 1), \quad \forall S.$$

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<sup>38</sup> If  $h(w_i^s, z)$  is discontinuous at  $w^d \in [0, z)$ , then it follows that  $\lim_{\epsilon \rightarrow 0^+} [h(w^d + \epsilon, z) - h(w^d, z)] < \lim_{\epsilon \rightarrow 0^+} [h(w_i^s + \epsilon, z) - h(w_i^s, z)]$ ,  $w_i^s \neq w^d \in [0, z)$ . Hence, it is rather easily seen that  $h(w_i^s, z)$  violates Axiom P if  $h(w_i^s, z)$  is discontinuous at some  $w^d \neq 0$  and at the same time continuous at  $w = 0$ . The assumption of continuity in the region close to the reference point is only controversial if our normative view attaches particular importance to the fact that a person is lifted out of the worst possible position. (Readers that find this discussion difficult should see Fig. 1 and Fig. 2 that are introduced shortly.)

<sup>39</sup> The poverty measure violates Axiom M1 if  $d = 1$ , and, thus, this parameter value is not permissible in (12).

Consequently,  $h(w_i^s, z) \in [d, 1]$ ,  $\forall w_i^s \leq z$ , and  $h(w_i^s, z)$  is only continuous on  $W^s$  if  $d = 0$ . The chosen size of  $d$  reflects the importance assigned to people crossing the poverty line. Any normative view where  $d \neq 0$  assigns a normative premium to the situation where a person is lifted out of poverty. The interpretation of this normative premium is straightforward:  $d = \gamma$  reflects the normative view that a marginal increase in the well-being of  $\gamma$  poor people at the poverty line (enabling them to escape poverty) is considered to be of the same importance for the alleviation of the poverty problem as lifting one person with the lowest possible level of well-being  $\underline{w}$  out of poverty. Hence, this approach enables us to present the issue of discontinuity at the poverty line in an intuitively appealing way which adds understanding to a problem that for a long time has not been very well understood in the poverty measurement literature.<sup>40</sup>

The discussion in this section may be summarized by Fig. 1 and Fig. 2. It follows from (6), (10), (11), and (12) that the feasible region for  $h(w_i^s, z)$  is  $[z - \underline{w} - 1]$  in Fig.1 and  $[b - f - 1]$  in Fig. 2. The normative position of the head count measure is represented by the straight line  $[a - 1]$ ; the normative position of the poverty gap measure is represented by the straight line  $[z - 1]$  in Fig.1.

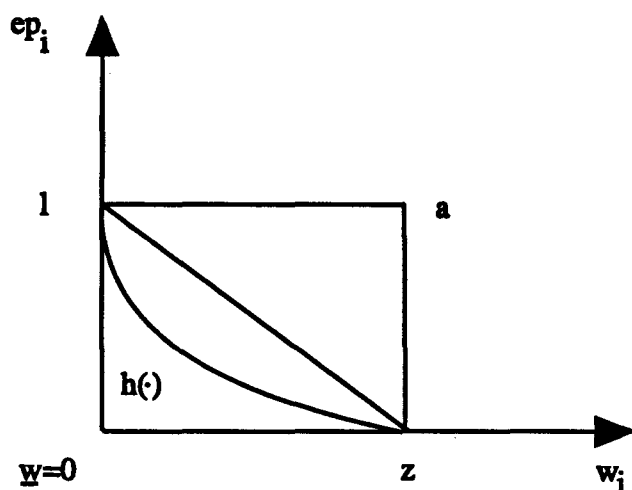


Fig. 1 No discontinuity at the poverty line ( $d = 0$ ).

<sup>40</sup> This is recently underlined by Ravallion (1994), p. 5: "Another - less well understood - issue concerns [poverty measures'] properties in the neighbourhood of the poverty line".

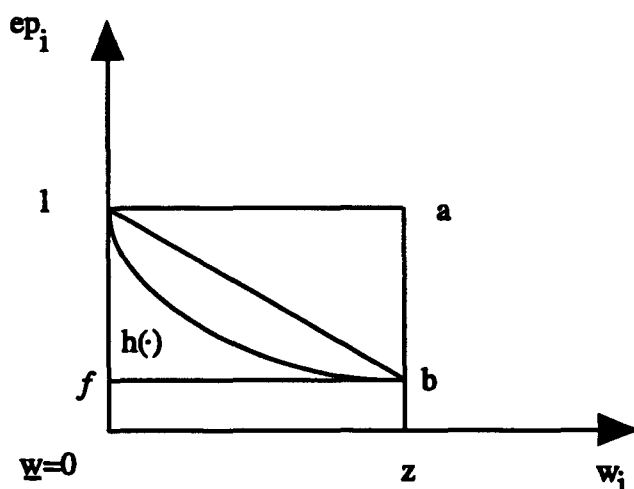


Fig. 2. Discontinuity at the poverty line ( $d = f$ ).

The following theorem collects together the results of this section:<sup>41</sup>

**Theorem 1:** *The class of poverty measures:*

$$P(W_p^S) \equiv \sum_{i=1}^{Q^S} h(w_i^S, z),$$

where  $h$  is a decreasing, continuously differentiable and, convex function of  $w_i^S$  on  $W_p^S$  and  $h(w_i^S, z) \in [0, 1]$ ,  $\forall w_i^S \in W_p^S$ ,  $\forall S$ , satisfies the axioms M1, M2, F1, F2, P, A, and S.

<sup>41</sup> The class of poverty measures reported in Theorem 1 is related to the class of poverty measures discussed by Atkinson (1987) (which also covers the class of poverty measures  $P^F$  discussed in section 2), but there is a substantial distinction between how these two classes of poverty measures treat changes in the population size. The class of poverty measures suggested by Atkinson is defined in per-capita terms, and - as discussed in section 2.1 - this approach faces deep problems in poverty comparisons between societies with different population size. However, this is not the case for  $P$  (which satisfies Axiom F2 and Axiom M2). Moreover, the approach outlined here provides a powerful setting for a discussion of the various normative positions that one may adopt within the basic framework, and, hence, does not simply claim that our normative reasoning on this issue should be of the kind that people may "propose measures which look better" (Atkinson (1987, p. 755).



*Proof.* Axiom M1 holds because  $h$  is a decreasing function of  $w_i^s$  on  $W_p^s$ . Axiom P holds because  $h$  is a continuous and convex function in the same region. Axiom F1 and Axiom F2 hold because  $P$  is a function of  $W_p^s$ . Axiom A holds because  $h$  is the same for every individual in any society, and Axiom M2 and Axiom S hold because  $P$  is separable in the effective poverty of individuals and  $h(w_i^s, z)$  is independent of  $w_{-i}^s$ .

There are poverty measures not covered by Theorem 1 that also satisfy the basic axioms outlined in section 4 (as for example variants of  $P$  where  $h$  is not a differentiable - though still a continuous - function of  $w_i^s$  on  $W_p^s$ ). But these poverty measures do not represent distinct normative positions that should be taken into consideration in a normative discussion of the problem of poverty.<sup>42</sup> It suffices to discuss  $P$  in order to provide a reasonable approximation of the various normative positions that we may adopt within the outlined framework, and, hence, I shall in the rest of the essay narrow the discussion to the class of poverty measures reported in Theorem 1.

## 6. The Final Step

The pursuit of a complete cardinalization of the problem of poverty may be too ambitious a aim, because the object we attempt to measure may be opaque. The danger of overprecision in poverty (and inequality) measurement has been stressed by Sen, who argues that "if an underlying idea has an essential ambiguity, a *precise* formulation of that idea must try to *capture* that ambiguity rather than lose it".<sup>43</sup> However, the ambiguity of an idea cannot defend an arbitrary representation of that idea, and, thus, the importance of providing clarity in the foundation of the chosen representation should be obvious. In this section, I sketch three plausible responses to this problem.

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<sup>42</sup> There may be one exception, to wit the class of poverty measures that represent the normative view that we ought to introduce a worst off position parameter (analogue to the poverty line parameter) in order to capture the normative premium of lifting a person out of the worst possible situation. Such a parameter may easily be incorporated in the same way as sketched with respect to the poverty line parameter, but it is left to the reader to make such a modification of the outlined framework.

<sup>43</sup> Sen (1992), p. 48-49. See also Sen (1973) and Foster (1994).

## 6.1 A Pluralistic View

The most straightforward response is to report on the poverty problem from various normative positions. This approach is well-known in poverty measurement literature, but the relevance of the parameter values traditionally applied may - as I return to shortly - be questioned. Three distinct normative positions are illustrated in Fig. 3, where S, M, and W indicate, respectively, strong, medium and weak aversion against inequality in well-being among the poor.<sup>44</sup>

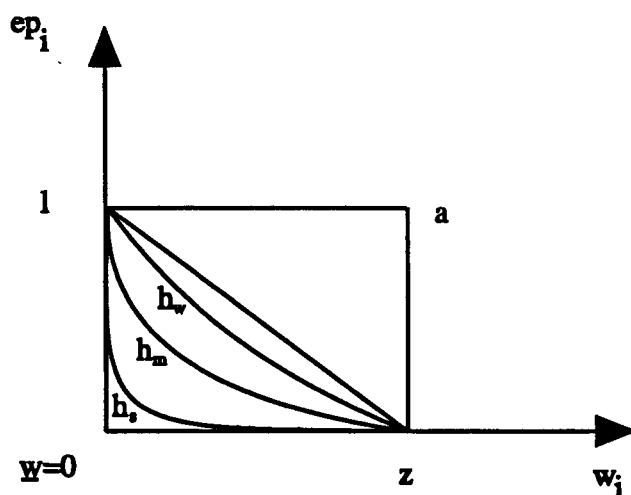


Fig. 3. Three normative positions on poverty; ( $d = 0$ ).

These normative positions may be approximated by several classes of functions. I indicate one solution by applying a class of polynomial functions (which is frequently used in the poverty measurement literature). Thus, the class of normative aggregate poverty measures may be represented as follows:

$$(13) \quad P^P(W_p^S) \equiv \sum_{i=1}^{Q^S} [a(w_i^S)^n + b], \quad \forall S,$$

<sup>44</sup> Of course, a corresponding figure may be drawn for cases where  $d \neq 0$ .

where  $n$  is a normative parameter, and  $a$  and  $b$  are constants. It follows from (6) and (12), respectively, that  $b = 1$  and  $a = \frac{(d-1)}{z^n}$ , such that  $P^P$  may be written as follows:

$$(14) \quad P^P(W_p^S) = \sum_{i=1}^{Q^S} \left[ (w_i^S)^n \frac{(d-1)}{(z)^n} + 1 \right], \forall S.$$

The normative parameter  $n$  may be interpreted within the outlined framework, to wit as the badness assigned to a chosen well-being level in terms of the reference poor.<sup>45</sup> Formally, we may write the normative choice as follows: Choose  $n_\tau$  for some  $\tau$  in the following equation:

$$(15) \quad h(w_i^S = \tau z, z) = n_\tau \quad \tau \in (0,1) \\ n_\tau \in (0, [1 + \tau(d-1)]),$$

where the feasible region for  $n_\tau$  follows from Axiom P. By combining (14) and (15), we find that:<sup>46</sup>

$$(16) \quad P^P(W_p^S) = \sum_{i=1}^{Q^S} \left[ (d-1) \left( \frac{w_i^S}{z} \right)^{\frac{\ln(\frac{n_\tau-1}{d-1})}{\ln \tau}} + 1 \right], \forall S.$$

S, M and W in Fig. 3 may now be approximated by substituting into (16) respectively  $n_{\frac{1}{2}}^S = \frac{1}{30}$ ,  $n_{\frac{1}{2}}^M = \frac{1}{4}$ ,  $n_{\frac{1}{2}}^W = \frac{2}{5}$ , and  $d = 0$ . The important part of this discussion, though, is not these numbers in themselves, but the fact that we may easily discern the

<sup>45</sup> If we remove Axiom P, it is easily seen that  $P^{-(\text{Axiom P})}(W_p^S) = \sum_{i=1}^{Q^S} [1 + \frac{(d-1)}{z} w_i^S]$ , i.e.

$P^{-(\text{Axiom P})}$  is the total poverty gap when  $d = 0$ .

<sup>46</sup> Equivalently, the same kind of reasoning may be applied on, for example, a class of symmetric hyperbolas, where (when  $d = 0$ ) the expression corresponding to (16) is

$$P^{SH}(W_p^S) = \sum_{i=1}^{Q^S} \frac{(z - w_i^S)}{z} \frac{1}{\theta}, \text{ with } \theta = \frac{n_\tau \tau z}{w_i^S (1 - \tau + n_\tau) + n_\tau \tau z}.$$

implications that follow from the various parameter values. By way of illustration, the interpretation of the normative position S is that thirty people with well-being level  $w_i^s = \frac{1}{2}z$  are considered to constitute the same poverty problem as one person at the lowest possible level of well-being. Hence, this approach makes explicit the kind of weighting that is already implicit in most of current poverty measurement literature, and, thus, makes it possible to do a well-founded cardinalization of the problem of poverty.

We may within this framework reinterpret the conventional parameter values applied in normative poverty analysis based on the class of Foster-measures (which was discussed in section 2 of this essay); to wit  $\alpha = 2$  and  $\alpha = 3$ .<sup>47</sup> It is easily seen from Fig. 4 that these two parameter values do not represent very different normative positions on the problem of poverty, and both of them may be characterized as portraying medium aversion against inequality in well-being among the poor. Hence, the gain achieved by reporting normative conclusions based on both of these parameter values may be questioned.

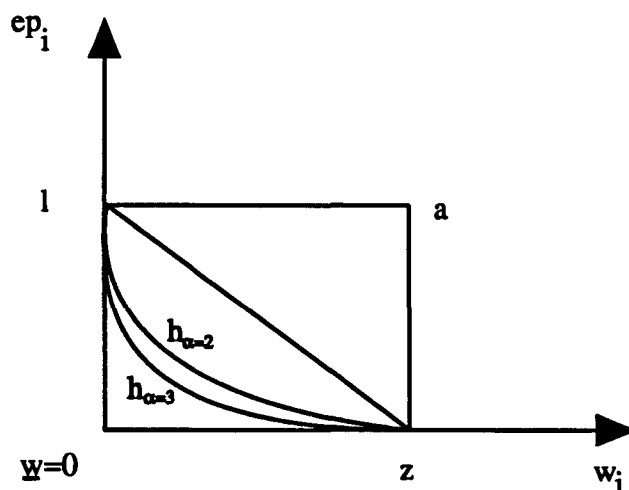


Fig. 4. Commonly reported ethical views on poverty.

<sup>47</sup> In this discussion, we have to adjust for the fact that the class of Foster-measures is defined in the income space and within a per-capita framework.

## 6.2 Further structure

An alternative response may be to look for another reasonable normative property (in addition to the basic axioms) which can support the selection of one single measure as the normative basis of poverty analysis. I am going to advance one such property (without defending it), but it is important to underline that the aim of this discussion is primarily to indicate a way of structuring normative poverty measurement, and not necessarily to reach one single poverty measure which everyone should agree upon.

**Property X:** *The poverty gap elasticity of effective poverty should equal the inverse of the relative poverty gap* [  $El_{(z-w_i^s)} h(w_i^s, z) = \frac{\partial h}{\partial(z-w_i^s)} \frac{(z-w_i^s)}{h} = \frac{z}{(z-w_i^s)}$  ].

Property X sketches a weighting scheme where the response of effective poverty from an increase in the poverty gap is given by the relative poverty gap. Hence, a one percent increase in the poverty gap should according to Property X induce a  $\left[ 1 / \left( \frac{z-w_i^s}{z} \right) \right]$  percent increase in effective poverty (i.e. effective poverty should, for example, increase with two percent if person  $i$  with well-being  $w_i^s = \frac{1}{2}z$  experiences a one percent increase in the poverty gap).

It follows from Property X that:

$$(17) \quad \frac{\frac{\partial h^x}{\partial(z-w_i^s)}}{h^x} = \frac{z}{(z-w_i^s)^2}.$$

An interesting interpretation of (17) can be achieved by applying the following identity:

$$(18) \quad \frac{\partial h^x(g^x(w_i^s, z))}{\partial(z-w_i^s)} \equiv \frac{\partial h^x(g^x(w_i^s, z))}{\partial g^x(w_i^s, z)} \frac{\partial g^x(w_i^s, z)}{\partial(z-w_i^s)}.$$

If we take into account that the natural exponential function  $e$  possesses the property of being its own derivate, then (17) follows from (18) if  $h^X(g^X(w_i^S, z)) = e^{g^X(w_i^S, z)}$  and  $\frac{\partial g^X(w_i^S, z)}{\partial(z - w_i^S)} = \frac{z}{(z - w_i^S)^2}$ . By integration we find that:

$$(19) \quad g^X(w_i^S, z) = -\frac{w_i^S}{(z - w_i^S)} + K,$$

where  $K$  is an arbitrary constant. (6) implies that  $K = 0$ , and we may thus state the following theorem:<sup>48</sup>

**Theorem 2:**  $P^X(W_p^S) \equiv \sum_{i=1}^{Q^S} e^{-\frac{w_i^S}{z - w_i^S}}$ ,  $\forall S$ , is the only poverty measure within the class of poverty measures  $P$  that satisfies Axiom M1, M2, F1, F2, P, A, S and Property X.

*Proof.* The necessity part of Theorem 2 is obtained by verifying that  $P^X$  possesses Property X. The sufficient part is established by checking that no other function within this class of poverty measures possesses the same elasticity property (which from Fig. 1 should be straightforward).

Let me close this discussion by once again reminding the reader that the intention of this discussion was not at all to propose Property X as a fundamental normative property, but rather to indicate how we may approach the problem of structuring normative poverty measurement within the class of poverty measures reported in Theorem 1. And it is important to notice that this is not an arbitrary choice of a poverty measure within a class of poverty measures. It is a choice based on an outlined property which we may or may not find acceptable. Hence, if Property X reflects a sensible normative position (and we accept continuity at the poverty line), then Theorem 2 establishes that  $P^X$  is a reasonable poverty measure to apply in a cardinalization of normative poverty measurement.

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<sup>48</sup> Notice that  $P^X(W_p^S)$  is not defined for  $w_i^S = z$ .

### 6.3 Ordinal ranking

Interesting tools have been developed in the poverty measurement literature in order to support an ordinal ranking of the problem of poverty in comparisons among societies.<sup>49</sup> Properties of a stochastic dominance relation have been used to support poverty orderings and to reveal the relationship between the Lorenz ordering and a poverty ordering.<sup>50</sup> In this paragraph, I sketch a similar approach for the class of poverty measures reported in Theorem 1, and, moreover, propose an interesting cardinal complement to the traditional approach, which probably will make the ordinal ranking framework even more applicable for practical purposes.

Let  $APB$  stand for society  $A$  having a more severe poverty problem than society  $B$  according to any poverty measure in the class of poverty measures  $P$ . Moreover, let us consider continuous well-being distributions where the marginal density and cumulative density functions of well-being are given by  $q(w)$  and  $Q(w)$ , respectively; i.e. both marginal density and cumulative density are expressed in *number* of people. Hence, the class of poverty measures  $P$  may be written as follows:

$$(20) \quad P(W_p^S) = \int_0^z q^S(w)h(w,z)dw, \forall S.$$

We may now state the following theorem:<sup>51</sup>

**Theorem 3:** For any  $S = A, B$ :  $[\Delta Q^{A,B}(w) \equiv Q^A(w) - Q^B(w) > 0, \forall w \in [0, z]]$   
 $\rightarrow APB$ .

*Proof.*  $APB$  implies that:

$$(21) \quad \int_0^z (q^A(w) - q^B(w))h(w,z)dw > 0.$$

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<sup>49</sup> See also Atkinson (1987) and Foster and Shorrocks (1988).

<sup>50</sup> Foster and Shorrocks (1988), p. 176.

<sup>51</sup> See also Atkinson (1987).

It follows from (6), (10), and (12) that (21) is satisfied if  $\Delta q^{A,B}(w) > 0, \forall w \in [0, z]$ . Moreover, if we integrate (21) by parts, it is easily seen that  $APB$  also implies that:

$$(22) \quad \Delta Q^{A,B}(z)h(w=z, z) - \int_0^z \Delta Q^{A,B}(w) \frac{\partial h(w, z)}{\partial w} dw > 0.$$

Hence, the proof is established by taking into account (10), (12), and (22).

The interpretation of Theorem 3 is straightforward. As established in the first part of the proof, the weights assigned to levels of well-being (as long as they satisfy the basic axioms) are irrelevant for ordinal poverty comparison if the number of poor people in society  $A$  at any level of well-being is larger than in society  $B$ . Moreover, the second part of the theorem establishes that the weighting scheme also is irrelevant for this purpose as long as the cumulative number of people at any level of well-being (below the poverty line) is larger in society  $A$  than in society  $B$ . The reason is simply that in these cases, a "deficit" of  $A$  relative to  $B$  in the marginal density of poor people at some level of well-being is outweighed (in the normative evaluation of the poverty problem) by a "surplus" in  $A$  relative to  $B$  at a lower level of well-being.

Theorem 3 supports ordinal ranking in some cases, but may nevertheless be too restrictive a tool in order to reject ordinal ranking in situations not covered by this theorem. A more general basis for ordinal ranking, though, can be established if we adopt one particular class of functions (as for example the class of polynomial functions discussed in paragraph 6.1), and let  $RV_d^\tau$  be the set containing the range of acceptable values for the normative parameter  $n_\tau$  (which will be a subset of  $(0, (1 + \tau(d-1)))$ ). Moreover, let  $AP^{RV_d^\tau} B$  stand for society  $A$  having a more severe poverty problem than society  $B$  according to the normative positions incorporated in  $RV_d^\tau$ , i.e.  $AP^{RV_d^\tau} B$  iff  $P_{d, n_\tau}(W_p^A) > P_{d, n_\tau}(W_p^B), \forall n_\tau \in RV_d^\tau$ .

The concept of a *critical comparison value* ( $ccv_\tau$ ) may now be introduced:

**Definition 2 (CCV):**  $ccv_\tau^d \equiv \{n_\tau | P_{d, n_\tau}(W_p^A) = P_{d, n_\tau}(W_p^B)\}$ .



Hence, by reporting on the critical comparison values we may achieve ordinal poverty ranking in cases where Theorem 3 is unable to guide us. Consequently, we may apply the critical comparison value to provide a broader framework for ordinal poverty comparison.

**Theorem 4:** *There are four feasible regimes in ordinal poverty comparison between any two societies  $S = A, B$ :*

- I.  $ccv_\tau^d = \{\emptyset\} \leftrightarrow [APB \vee BPA]$ .
- II.  $[ccv_\tau^d \cap RV_d^\tau = \{\emptyset\}, \exists RV_d^\tau \subseteq (0, \langle 1 + \tau(d-1) \rangle)] \rightarrow [AP^{RV_d^\tau} B \vee BP^{RV_d^\tau} A]$ .
- III.  $[ccv_\tau^d \subset RV_d^\tau, \exists RV_d^\tau \subseteq (0, \langle 1 + \tau(d-1) \rangle)] \rightarrow [AP^{RV_d^\tau} B \vee BP^{RV_d^\tau} A] \vee [\sim AP^{RV_d^\tau} B \& \sim BP^{RV_d^\tau} A]$ .
- IV.  $[ccv_\tau^d = \langle 0, 1 + \tau(d-1) \rangle] \leftrightarrow W_p^A = W_p^B$ .

*Proof.* Part I and II of Theorem 4 follow from Definition 2, and from the fact that for a given well-being distribution,  $P$  may be perceived as a continuous function of  $n_\tau^d$  (which it is straightforward to verify). Part III follows from the fact that this continuous function may intersect several times for the respective well-being distributions (which is also easily verified).<sup>52</sup> Part IV follows from Definition 2 and Axiom M1.

Part 1 of Theorem 4 is an extension of Theorem 3, because  $ccv_\tau^d = \{\emptyset\}$  may be fulfilled in situations not covered by Theorem 3. An example may serve to illustrate this: A comparison of the problem of poverty between  $W_p^A = \{\underline{w}, \underline{w}\}$  and

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<sup>52</sup> If we assume that  $d = 0$ , then  $P^P(n_\tau, W_p^A) = \sum_{i=1}^{Q^A} \left[ \left( \frac{w_i^A}{z} \right)^{\frac{\ln(1-n_\tau)}{\ln \tau}} + 1 \right]$ . It follows that

$$\frac{\partial P^P(n_\tau, W_p^A)}{\partial n_\tau} = \sum_{i=1}^{Q^A} \left[ \frac{1}{(n_\tau - 1) \ln \tau} \left( \frac{w_i^A}{z} \right)^{\frac{\ln(1-n_\tau)}{\ln \tau}} \ln \left( \frac{w_i^A}{z} \right) \right] \geq 0.$$

The intuition of this result is apparent from Fig. 4, where we see that (for example)  $h_s$  is below  $h_w$  for every level of well-being below the poverty line and above the reference poor. Hence, the number of reference poors assigned to a level of well-being is never larger in  $h_s$  than in  $h_w$ , and thus the reported overall number of reference poors for society A may never be larger in  $h_s$  than in  $h_w$ . Moreover, it is straightforward to

verify that  $\frac{\partial^2 P^P(n_\tau, W_p^A)}{\partial n_\tau^2} \geq 0$ . Thus, the underlying intuition of Part III of Theorem IV should be

apparent, and the proof is easily established by an example.

$W_p^B = \{(z - \varepsilon), (z - \varepsilon), (z - \varepsilon)\}$ , where  $\varepsilon$  is a small number, is not covered by Theorem 3. Nevertheless,  $ccv_{\tau}^{d=0}$  will be an empty set. Thus, this approach provides a more complete description of the cases where we are able to attain agreement among all the feasible normative positions covered by the basic framework.

But there may be feasible normative positions that are considered as inappropriate by everyone in society. Part II of Theorem 4 is of considerable importance in these cases.<sup>53</sup> It establishes that an ordinal ranking will be endorsed by everyone who accepts the range of parameter values present in  $RV^{\tau}$  (and, of course, also by those who accept a subset of these parameter values). Hence, it sketches a less demanding approach to ordinal ranking of the problem of poverty than what is common in the poverty measurement literature. Situations covered by Part III of Theorem 4 may be less structured, though it also embrace cases where there is a unique critical comparison value. However, more research should be made in order to structure the various cases of Part III. Part IV of Theorem 4 is trivial.

## 7. Final Remarks

Poverty is an important element in a normative evaluation of economic policies and institutional reforms. Thus, the importance of acquiring a reasonable normative criterion that characterizes the problem of poverty in a society should be apparent. In this essay, I have argued that the per-capita approach in normative poverty measurement lacks a normative foundation and clouds the issue at stake. Moreover, I have presented a framework which deals with the problems of the conventional approach, and makes explicit the normative considerations needed in normative poverty measurement.

However, the framework outlined in this essay may be criticised for making poverty comparison between small and large societies nonsensical. There seems to be a bias towards the normative statement that aggregate poverty is worse in large societies than in a small society. But that is, of course, true, because there is more suffering and

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<sup>53</sup> Notice that Part I is only a special case of Part II, to wit the case where  $RV^{\tau} = (0, \langle 1 + \tau(d - 1) \rangle)$ .

destitution in for example India compared to Somalia. Hence, this line of criticism is no serious objection against the proposed approach. The class of poverty measures presented in this essay gives a cardinalization of a well-founded normative view on the problem of poverty - in contrast to the per-capita approach which normative foundation certainly may be questioned.

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## Distant Suffering and Morality<sup>1</sup>

### 1. Introduction

I am conscious of the fact that daily two thousand people are dying in Somalia, and that more than one million Somalis are in danger of starvation.<sup>2</sup> Nevertheless, my behaviour is not influenced by this information in a notable way, and I continue to live a life in affluence (and without any immense sense of guilt). What is wrong? Or is there anything wrong at all? Am I obliged to sacrifice my 'lightness of being' in order to save some lives on the east coast of Africa, or is such an act only for saints and nothing that morality demands of each of us?<sup>3</sup>

My moral intuition, though, tells me that I ought to do something. By acting, I may easily alleviate suffering,<sup>4</sup> and that is - if I trust my intuition on these questions - a good thing to do. Moreover, it is something I can do (at least to a certain extent) without having to sacrifice too many things that I consider to be of substantial

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<sup>1</sup> For their comments on earlier versions of this essay, I am grateful to Rune Jansen Hagen, Agnar Sandmo, Thomas Scanlon, and Svein Aage Aanes.

<sup>2</sup> The figures are from The Washington Report On Middle East Affairs, October 1992 (no. 4, p. 99). They are not representative for the present situation of Somalia, but it goes without saying that even worse figures may be reported from Rwanda. Moreover, the nature of the situation in many other impoverished countries causes this issue to be of more general importance.

<sup>3</sup> Maybe we should join Crane (1899): *A man said to the universe: "Sir, I exist!" - "However", replied the universe, "The fact has not created in me a sense of obligation."* (quoted in Hardin (1976), p. 135). The deeper question about the overall status of morality is not elaborated on in this essay, though, but see Taylor (1993).

<sup>4</sup> Some readers may question this claim, and argue that the problem in these situations is the absence of a possibility to contribute to the improvement of the conditions of those who suffer in these countries. Undoubtedly, there are problems of this kind, but I doubt that they completely erase the relevance of the issue of this essay. See also Sen (1984) for a discussion of the approach of 'fantasie' (which is the approach that neglects the problem of 'power realities' in the countries in question).

importance in my life. Hence, it appears appropriate to ask why I am not moved by these thoughts. What restrains me from acting in accordance with my moral intuition? This is the puzzle that I shall discuss in the following, where I aim to provide some understanding on the complexity surrounding my (and, I believe, many other people's) internal conflict about suffering in the poor part of the world.<sup>5</sup>

In section 2, I indicate why our moral motivation may distinguish between distant and near suffering. In section 3-4, I discuss whether the moral frameworks of classical utilitarianism and contractualism may support my intuition on this issue, and in section 5, I comment on the link between moral motivation and day-to-day action.

## 2. Distant Suffering and Moral Motivation

What may motivate the claim that "[s]uffering outside one's own country just is not something one has a duty to help alleviate, because those suffering belong to a different *society*, and hence to a different moral community"?<sup>6</sup> Are there any morally relevant differences between suffering in, respectively, my own society and distant poor countries that can provide support for such a seemingly arbitrary narrowing of a person's moral community? Two aspects may be of importance in this context, and I shall consider them in brief in this section. We may call them *the issue of communication* and *the issue of co-operation*.

The issue of communication may indicate an important distinction between our moral motivation towards distant and near suffering. If we endorse the view that morality ought to be linked to our ability to sympathise with others (as claimed by, among others, Hume), then our moral motivation will be strongly connected to the extent that we communicate and identify with those who suffer. In this respect, distance undoubtedly plays an important role. People in distant countries are (obviously) not

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<sup>5</sup> Suffering in distant affluent societies raises some further complex moral questions. May I for example claim that the situation of men in the Harlem region of New York - who have less chance of reaching the age of 40 than Bangladeshi men have - is outside my moral sphere because this suffering takes place in one of the most prosperous cities of the world? (See Sen (1992), p. 114-115 for a discussion of these figures.) The citizens of New York have the resources to alleviate the suffering in Harlem, but it is a matter of fact that they - for some reason - do not take advantage of this possibility. Hence, we may question the moral relevance of the fact that this suffering takes place in an affluent society. However, in this essay, I concentrate on the more straightforward problem of our moral obligations with respect to suffering in distant poor parts of the world.

<sup>6</sup> This claim is also discussed in Dower (1991), p. 279.

part of our daily life in the same way as people in our own society, and, thus, we are more or less unable to receive by communications their inclinations and sentiments.<sup>7</sup> We are not connected to them in a way that makes it necessary for us to argue and defend our way of living as a response to their claims. There exist no channels through which people in distant poor countries may easily question our position and we are obliged to respond. Thus, it is reasonable to expect that we acquire more understanding and sympathy for people who suffer in the local community than for people in distant regions,<sup>8</sup> and, hence, it follows inevitably that the moral motivation derived from the property of sympathy will concentrate on the alleviation of suffering in our own community.<sup>9</sup>

The issue of co-operation has been stressed by (among many others) Rawls and Gauthier, though, as I return to shortly, they deviate on the importance attached to this source of moral motivation.<sup>10</sup> In defending the view that the distribution of income ought to be regulated by the basic institutions of society, Rawls claims that "the well-being of each depends on a scheme of social co-operation without which no one could have a satisfactory life".<sup>11</sup> Correspondingly, Gauthier claims that "we shall show that under plausible conditions, the net advantage that constrained maximizers [i.e. persons who are disposed to comply with mutually advantageous moral constraints] reap from co-operation exceeds the exploitative benefits that others may expect. From this we conclude that it is rational to be disposed to constrain maximizing behaviour by internalizing moral principles to govern one's choices".<sup>12</sup> Hence, both Rawls and Gauthier motivate their line of reasoning by claiming that some scheme of obligations is needed in order to acquire the feasible benefits of co-operation. But it is probably not too controversial to assume that our well-being is more or less independent of any

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<sup>7</sup> Clearly, this problem is even more pressing with respect to our relationship to future generations.

<sup>8</sup> See also Tyler and Dawes (1993) for a discussion of the relationship between group identity and the perception of justice principles.

<sup>9</sup> Notice, though, that this is not a problem for the line of reasoning that rely on the property of sympathy in moral questions, because - within this setting - we do not have any reason to contribute to the alleviation of suffering anywhere: "[T]he ultimate ends of human actions can never, in any case, be accounted for by *reason*, but recommend themselves entirely to the sentiments and affections of mankind". (Stated by Hume in the First Appendix to the *Inquiry Concerning the Principles of Morals* (see Wiggins (1987), p. 118)). Thus, there does not exist any rational scheme of sympathy, and, hence, we should not feel any sense of guilt if our behaviour is not influenced by facts about suffering in Somalia (or anywhere else). Our behaviour is guided by our desires, and our desires are beyond rational evaluation.

<sup>10</sup> Rawls (1971,1993) and Gauthier (1986).

<sup>11</sup> Rawls (1971), p. 103.

<sup>12</sup> Gauthier (1986), p. 15.



co-operation with those who suffer in Somalia,<sup>13</sup> and, thus, this line of reasoning seems to make leeway for a distinction between distant and near suffering in moral reasoning. The alleviation of near suffering may very well contribute to improve the well-being of the nonpoor part of the local community, because (by way of illustration) we may thereby avoid riots or reduce violence. This fact may motivate us to establish a scheme of moral obligations that requires us to contribute to the alleviation of near suffering, but - at the same time - does not involve any obligations with respect to distant suffering.

However, contrary to Gauthier, Rawls also stresses the idea of impartiality (in addition to the idea of mutual advantage) in discussing the underlying motivational sources of his framework,<sup>14</sup> and if we take this aspect into account, it becomes less plausible to claim that the Rawlsian framework does not impose any obligations on us with respect to distant suffering. I shall return to a discussion of this source of motivation in section 4, where I elaborate on the moral framework of contractualism (which is closely related to the Rawlsian framework). But, that is to say, the sources of moral motivations discussed in this section are undoubtedly of utter importance in our lives, and, hence, we may expect that moral theories not founded on these sources more easily involve moral arguments that are in conflict with our conventional opinions. Thus, an essential part of the following discussion will be to examine other plausible sources of moral motivation, and, moreover, to discuss why they seem to play such an insignificant role in our lives. I start by examining the framework that has dominated the arena of moral reasoning for the last two hundred years.

### 3. Classical Utilitarianism

Moral questions are in classical utilitarianism judged solely on the basis of changes in the aggregate amount of well-being, and an act is characterised as good if it contributes to increase the overall amount of well-being in society.<sup>15</sup> This simple algorithm for moral reasoning is based on the view that well-being is the only aspect

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<sup>13</sup> This claim is obviously imprecise, because it does not clarify the underlying interpretation of the concept of well-being. As should become evident in section 4, a comprehensive understanding of the concept of well-being (incorporating our full humanity) may support co-operation with people who suffer in distant regions on the basis of this source of moral motivation.

<sup>14</sup> Rawls (1993), p. 16-17.

<sup>15</sup> Here, I ignore the discussion about how to interpret well-being within the utilitarian framework. On this issue, see Sen (1982).

of value, and, thus, the source of moral motivation within this setting is the possibility to bring about the most valuable states of affairs.<sup>16</sup>

It follows straightforwardly that distance (in time and space) has no deep-rooted moral relevance within the classical utilitarian framework (though, as I return to shortly, it may play an instrumental role in establishing moral rules that contribute to the fulfilment of the classical utilitarian end). According to classical utilitarian reasoning, we ought to bring about as much improvement in overall well-being as possible - independent of where the increase in well-being takes place. Hence, the difficulty of making interpersonal comparisons aside, it seems like the classical utilitarian framework demands us to accept a substantial reduction of our own level of well-being if it contributes to an improvement in the well-being of those who suffer in the poor parts of the world (whether it should be distant or near). In the words of Singer: "...I and everyone else in similar circumstances ought to give as much as possible...perhaps...to the point at which by giving more one would cause oneself and one's dependants as much suffering as one would prevent in [Somalia]".<sup>17</sup>

However, this may be too hasty a conclusion about the classical utilitarian scheme of moral obligations towards distant suffering, and some further elaboration on the structure of this framework may turn out to be of a certain interest for our discussion. Frequently, the classical utilitarian framework has been characterised as an overdemanding moral theory (and the claim of Singer probably manifests this view), because it claims that we ought to bring about the most valuable states of affairs by every single act we perform. This difficulty reflects the well-known problem of Mill on how to define a distinction between expedient acts (i.e. acts that it would be good to do, but not wrong not to do) and just acts (i.e. acts that it would be wrong not to do).<sup>18</sup> The possibility explored by some authors is to obtain a reasonable solution to this problem by appealing to the fact that a claim about classical utilitarianism as a reasonable moral framework does not necessarily imply anything about the appropriateness of the classical utilitarian decision procedure.<sup>19</sup> The idea is simply that classical utilitarianism (in the words of Parfit) may be an indirectly self-defeating

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<sup>16</sup> There are some other possible interpretations of the foundation of classical utilitarianism. On this issue, see Kymlicka (1990) and Tungodden (1994a).

<sup>17</sup> Singer (1972), p. 234.

<sup>18</sup> Mill (1861).

<sup>19</sup> On this issue, see Kymlicka (1990).

theory, i.e. that the end of classical utilitarianism will, on the whole, be less well served by applying a classical utilitarian decision procedure.<sup>20</sup> The classical utilitarian decision procedure, applied to every act we perform, may be in conflict with essential elements of a good life (like the ability to make personal commitments), and, hence, it may turn out to be a failure - in terms of the classical utilitarian end - to apply the classical utilitarian decision procedure in day-to-day action. But if that were the case, then the classical utilitarian framework demands that we apply a different decision procedure, to wit the one that contributes most efficiently to the achievement of the aims of classical utilitarianism.<sup>21</sup> The structure of this other decision procedure may (for some reason) be less demanding than the classical utilitarian decision procedure, and, thus, the classical utilitarian framework may escape the claim of being an overdemanding moral theory.

This other decision procedure may allow distance to become a relevant parameter in moral reasoning, and, thus, the conclusion of Singer does not follow straightforwardly from the classical utilitarian framework. In order to clarify the appropriate scheme of moral obligations within the classical utilitarian framework, we have to examine various feasible moral decision procedures in the light of the classical utilitarian end. I shall not pursue this line of reasoning, though, because I doubt that it provides an appropriate defence for the real problem of classical utilitarianism. Classical utilitarianism claims that if the overall increase in well-being is the same in two situations, then it does not matter whether the increase in well-being takes place as a significant improvement in the life of a person who is suffering or as an insignificant improvement in the well-being of a large group of very well-off people. This claim, which is about the structure of value, cannot be escaped by appealing to the possibility of defending a non-utilitarian decision procedure within this setting. Even though it may turn out that the classical utilitarian framework implies an appealing non-utilitarian decision procedure in day-to-day action, we cannot escape the conclusion that the classical utilitarian framework is indifferent with respect to whether the improvement in well-being takes place in the life of a person who is suffering or in the life of a well-off person.

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<sup>20</sup> Parfit (1984).

<sup>21</sup> Hence, classical utilitarianism is not a directly self-defeating theory; once again, see Parfit (1984).

Hence, I find it implausible that the classical utilitarian framework represents a satisfactory foundation for moral reasoning. Undoubtedly, it captures one important argument that ought to be taken into account in pondering on moral problems, namely that - *ceteris paribus* - by increasing the overall amount of well-being in society we contribute to bring about a more valuable state of affairs. But at the same time it is in deep conflict with our moral intuition on other elements of the structure of the realm of value, and, thus, we shall turn to a discussion of an alternative moral framework that seems to provide a more reasonable setting for moral reasoning.

#### 4. Contractualism

The source of moral motivation in contractualism is our (presumed) desire for justifying our actions to others on grounds they could not reasonably reject (where reasonableness is related to individuals' reflected judgement of the situation).<sup>22</sup> A sensible way of justifying one's acts - according to the framework of contractualism - is to see whether these acts could have been incorporated in a (hypothetical) general agreement among informed and unforced individuals. If this is not the case, then the act in question is considered wrong. Obviously, aggregate considerations should constitute an important part of the judgement of the reasonableness of an act, but (and this is the substantial deviation from the classical utilitarian decision procedure) changes in the overall amount of well-being have no exclusive claim in contractualism. Hence, the source of moral motivation in classical utilitarianism - to wit to bring about more valuable states of affairs - plays an indirect role in the contractualistic framework, though it is not the ultimate source of moral motivation in this line of reasoning.

In order to derive any implications from the framework of contractualism for distant suffering, we have to elaborate on how to define the scope of the desire for justification. Scanlon claims that we have a desire for being "in actual agreement with the people around us",<sup>23</sup> and a hasty conclusion may then be to say that this framework claims that we do not have to include the people of Somalia (or anyone else in distant regions) in our scheme of moral obligations. But Scanlon then goes further and argues that no one shall fall outside the protection of morality because

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<sup>22</sup> Scanlon (1982), p. 116.

<sup>23</sup> Scanlon (1982), p. 116.

they are not able to contribute any benefits to the other participants: "[T]he absence of these capacities alone does nothing to undermine the possibility of a justification of a being".<sup>24</sup> Hence, it is the possibility of justification that is perceived as the relevant criterion to be applied in order to settle the appropriate scope of morality, where the possibility of justification is assumed to depend on our ability to have a clear sense of which things can be said to make the situation better or worse for that being. Consequently, it follows straightforwardly that the scope of contractualism incorporates people in distant regions.<sup>25</sup>

But why should we all be moved by a *desire* to justify our actions whenever there is a *possibility* for justification? Are we guaranteed that moral reflection will persuade us to transform any possibility for justification into a desire for justification? It is beyond the scope of this essay to provide a general answer on this complex issue, but if we narrow the discussion to the case in question, namely distant suffering, I believe a glimpse of an answer may be perceived. If we *really* reflect upon the possibility for justifying our actions to people that are dying and starving in Somalia, we also truly recognise how effortlessly we are able to alleviate some immense suffering without having to sacrifice anything of comparable moral significance. And if this contrast in significance in the involved gains and losses is perceived, the desire for justification is - I shall claim - unavoidable. Why? Because, then, to neglect such a fact (by excluding distant suffering from what we perceive as our moral sphere) would be a "denial of an essential aspect of ourselves...of our full humanity".<sup>26</sup> Thus, the recognition of this fact (spurred by a perception of a possibility for justification) will urge us to have a desire for justifying our actions to people who suffer (independent of the distance in question).

It seems to me that the normative implications of this framework are rather straightforward and unquestionable in the context of distant suffering: We ought to accept a substantial reduction in the standard of living if this would contribute to an improvement in the well-being of people who suffer. There may be some leeway for partial considerations in such an agreement, i.e. we may argue that individuals

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<sup>24</sup> Scanlon (1982), p. 115.

<sup>25</sup> However, this conclusion does not involve any claim about the content of the (hypothetical) agreement, and, thus, it does not say anything about the extent of our obligations on distant suffering. Shortly, I return to this issue.

<sup>26</sup> Nagel (1991), p. 19-20.

entering the (hypothetical) contract agree that one is not morally obliged to sacrifice something of considerable moral importance in order to save lives or avoid starvation elsewhere. But nevertheless, the framework of contractualism appears to indicate that our obligations with respect to distant suffering are extensive, and, thus, it seems to be in deep conflict with conventional behaviour in our society.

## 5. Moral Motivation and Action

Why are we then not moved by the reasoning of contractualism? Why are we not motivated to act by the possibility of being able to justify our actions to others on grounds they could not reasonably reject (and by the possibility to bring about more valuable states of affairs)? Some people are, and they sacrifice the affluence we strive for and attempt (in one way or another) to contribute to the alleviation of human suffering in the world. And I doubt that anyone would claim that their lives are less good than ours. In fact, the integrity and completeness of their lives sometimes overwhelm us (or at least me), and - in my view - makes it plausible to claim that these features are the ultimate ends of a human life.<sup>27</sup> But what about the rest of us? Why are we not inspired to seek these ends, which from a distance seem so supreme?

One obvious (though not unquestionable) explanation is that we lack "moral education".<sup>28</sup> The frameworks presented in the preceding sections appeal to abstract reasoning and thorough reflection on moral questions, and it may be the case that we partly lack the ability to seriously reflect on moral problems. But even among people who have the opportunity to reflect and reason about these questions do moral arguments usually not spur any notable action. We may, of course, argue that a modern and complex world makes it more difficult to know which acts to perform in order to behave in accordance with one's moral beliefs, but I doubt that this problem can provide a satisfactory explanation on the lack of action with respect to distant suffering.

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<sup>27</sup> I have expressed a somewhat deviating position on this issue in Tungodden (1994b), where I stress the 'problem of space' and 'the problem of compatibility' in the realm of value. However, it may be the case - though not necessarily - that these two divergent arguments coincide at a certain level of abstraction, but it is beyond the scope of this essay to elaborate on this issue.

<sup>28</sup> See Scanlon (1982), p. 117, and Kymlicka (1990), p. 265-267.

The deeper problem is (as I see it) that even if we managed to attain a sustainable desire for justification, we usually would be unable to seek the corresponding desire fulfilment. There is (in Nagel's terms) a division within each individual between the personal and the impersonal standpoint,<sup>29</sup> and when the desire for justification is mainly related to the latter standpoint, everyday actions are inevitably governed by the personal standpoint. Therefore, for most people, the personal standpoint will overrule a sustainable desire for justification in their day-to-day behaviour. This is a fact that may explain why our behaviour is not influenced by knowledge about immense suffering in Somalia (or other distant regions), and which indicates the importance of establishing international institutions that can commit us to the moral obligations that we endorse when we take up the impersonal standpoint.

## 6. Final Remarks

Four sources of moral motivation have been discussed in this essay, and it turns out that they have rather different implications for the question of our moral obligations towards distant suffering. If sympathy and mutual advantage constitute the underlying foundation of moral reasoning, then (as debated in section 2) distant suffering should not pose any internal conflict within each of us. None of these sources of morality demands us to sacrifice anything of substantial importance in order to improve the well-being of (for example) those who suffer in Somalia, and, thus, they do not support any substantial change in our conduct on this issue. On the other hand, the implications of endorsing the framework of classical utilitarianism and contractualism are demanding, and (as indicated in section 3 and 4) the moral scheme of obligations they impose on us seems to be rather extensive. Thus, the presence of an internal conflict in our lives is understandable if all these four sources of moral motivation play an important role in our reasoning on this issue.

It may, of course, be claimed that the line of reasoning of classical utilitarianism and contractualism is flawed, and that we only should pay attention to demands derived from sympathy and mutual advantage. I have doubts about the appropriateness of this claim, though I have argued (in section 3) that the framework of classical utilitarianism poses some deep problems, and, moreover, that the implications of this framework are less evident than they seem to be on the face of it. Still, I believe that

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<sup>29</sup> Nagel (1991).

the source of moral motivation stressed by classical utilitarianism, namely the possibility to contribute to bring about a more valuable world, has some relevance, but it seems to me that this element is more appropriately captured within the setting of contractualism.

Two substantial problems are present within the framework of contractualism; first, what is the content of the hypothetical agreement that shall reflect our scheme of moral obligations, and, second, how are we to acquire the desire for justifying our actions to the other members of our moral community? In the context of distant suffering, though, the first problem seems to be rather trivial, and, thus, the discussion has primarily been about issues related to the second problem. In this debate I have indicated the relevance of international institutions, and - perhaps most important - the significance of making leeway for moral reflection in our lives.



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