EQUALITY, PRIORITY AND AGGREGATION

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Equality, Priority, and Aggregation

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Abstract

In this dissertation, I discuss two distributive principles in moral philosophy: Derek Parfit's Prioritarianism and Egalitarianism. I attempt to defend a version of Egalitarianism, which I call Weighted Egalitarianism. Although Parfit claims that Egalitarianism is subject to what he calls the Levelling Down Objection, I show (a) that my proposed Weighted Egalitarianism is not subject to the Objection, and (b) that it gives priority to the worse off people. The real difference between the two principles lies in how the weight of each person's well-being is determined. Prioritarianism assumes that there is a moral scale of the goodness of well-being, independently of distributions of people's well-being. I raise two objections to this claim: firstly, it is hard to believe that the choice of the level of well-being affects our distributive judgement; secondly, it is hard to believe that there is such a moral scale independently of distributions of people's well-being. On the other hand, Weighted Egalitarianism claims that the weight is given by the rank order position of the person in the ranking by well-being level. This means that, in Weighted Egalitarianism, the goodness of a distribution is an increasing, linear function of people's well-being. Weighted Egalitarianism is not affected by the choice of the level of people's well-being. Nor does it require require the moral scale of the goodness of well-being independently of distributions of people's well-being. Leximin, which might be a version of Prioritarianism, avoids my objections. But it is hard to support Leximin, because it rules out the trade off between the better off and the worse off. I conclude that Weighted Egalitarianism is more acceptable than Prioritarianism.

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(1) I, Iwao Hirose, hereby certify that this thesis, which is approximately 60,000 words in length, has been written by me, that it is the record of work carried out by me and that it has not been submitted in any previous application for a higher degree.

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(2) I was admitted as a research student in September 1998 and as a candidate for the degree of Ph. D. in September 1998; the higher study for which this is a record was carried out in the University of St Andrews between 1998 and 2003.

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Preface

In recent moral philosophy, Egalitarianism, following Derek Parfit's vigorous challenge, has become something of an unpopular position, although it has not been properly defined or understood. Many philosophers seem to have eschewed Egalitarianism for what has become known as Prioritarianism. Nevertheless, Egalitarianism is still a widely supported position in economics. Economists go into the technical detail of Egalitarianism, but do not emphasize its normative scope fully. In this dissertation, drawing upon insights from formal methods of economics, I shall defend a version of Egalitarianism, my aim being to revitalize its currency within moral philosophy.

In writing this dissertation, I have benefited from the discussions with many people. My greatest gratitude goes to my two supervisors, John Broome and John Skorupski. John Broome and John Skorupski have been so helpful both academically and personally. Without their advise and encouragement, this dissertation could not have been completed. My thanks also go to Dave Archard, Garret Cullity, Roger Crisp, Marc Fleubaey, James Griffin, Katherine Hawley, Sune Holm, Kent Hurtig, Karsten Klint Jensen, David McCarthy, Andrew Mason, Dennis McKerlie, Josh Parsons, Wlodek Rabinowicz, Joseph Raz, Stephen Read, Andrew Reisner, Simon Robertson, and Peter Vallentyne. I am very grateful for their comments and criticisms.

I should note that some parts of chapter 7 appear in my "Saving the greater number without combining claims" (*Analysis* 61: 2001) and "Aggregation and numbers" (*Utilitas* 16: 2004).

Contents

Chapter 1

Introduction

The present dissertation is about the distribution of well-being. More specifically, it is about the betterness of distributions of well-being. We often judge that one distribution of well-being is *better* than another. This dissertation is concerned with principles underlying such judgements of relative goodness of distributions. There are many distributive principles. For the most of part, this dissertation concentrates on Egalitarianism and Derek Parfit's Prioritarianism. I shall put forward a version of Egalitarianism, and attempt to defend it.

Egalitarianism, I believe, has not been properly understood in moral philosophy. Until the 1970's, as Rawls (1971) famously pointed out, the dominant doctrine in distributive justice was utilitarianism. Standard textbooks in political philosophy tell us that, as interpersonal aggregation of impartial spectators allegedly violates the separateness of persons, non-utilitarian philosophers proposed a non-aggregative distributive principle, which gives absolute priority to the worst off person, or group, in some sense (John Ralws's Difference Principle, Thomas Nagel's pairwise comparison, Thomas Scanlon's contractualism, and so on). And these proposed principles are seen to reawaken Egalitarianism within contemporary political philosophy. True. Rawls's Difference Principle is motivated by an egalitarian concern, namely that inequality should be arranged so that it benefits the least advantaged group of the society. However, it is debatable whether the Difference Principle really implies a version of Egalitarianism.[1]

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[1] Difference Principle may be seen as a version of deontic Egalitarianism. But it does not claim that equality is a good or that inequality is a bad.

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A radical claim on behalf of Egalitarianism has recently been made by Amartya Sen (1992). Sen claims that any sensible normative theory demands equality of something. According to Sen, John Rawls demands both equal liberty and equality in the distribution of primary social goods; Ronald Dworkin demands treatment as equals and equality of resources; Thomas Nagel demands economic equality; utilitarianism demands equal weights on everyone's utility; and even Robert Nozick demands equality of libertarian rights.[2] Sen himself demands equality of capability to function. However, in Sen's claim, the definition of equality is too broad, and it does not help much to defend conventional claim of Egalitarianism, i.e. equality of well-being.

Although Egalitarianism was not precisely defined or understood, it has faced a vigorous challenge from Derek Parfit and his followers, since Parfit proposed Prioritarianism in 1990's. In a relatively short period, Parfit's position, "Prioritarianism", developed in the 1990's, has become widely known, appearing in standard textbooks of ethics and political philosophy.[3]

The main goal of this dissertation is to defend a version of Egalitarianism, which I call *Weighted Egalitarianism*, from the Prioritarian challenge. In order to achieve this goal, I shall clarify the exact difference between Prioritarianism and Weighted Egalitarianism, and the respect with regard to which Weighted Egalitarianism is more plausible than Prioritarianism.

Another (subsidiary) goal is to elucidate the scope of Prioritarianism. Although I shall suggest a precise characterization of Prioritarianism, some Prioritarians may be ready to modify some of its basic claims in order to meet some of my criticisms. I shall therefore discuss two modified versions of Prioritarianism. One of these gives priority to those people below a certain absolute level of well-being over those others above that level (what I call the Threshold Principle in chapter 3). The other gives absolute priority to the worse off person (Leximin). I believe that this will help to understand the scope of Prioritarianism.

Throughout this dissertation, I shall often use the formal methods of economics. The formal methods developed in economics are very useful for understanding the structure of ethical theories in general, as well as distributive principles. In economics, there is a large literature of distributive

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[2] Sen (1992, pp. 12-13).

[3] See Arneson (1993, pp. 502-505), Kagan (1998, pp. 53-54), and Kymlicka (2002, p. 66).

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principles, and many results in the literature can contribute to the better understanding of debate between Prioritarians and Egalitarians. For example, this dissertation has greatly benefited from Amartya Sen's seminal book *On Economic Inequality*, which illuminates many points I tried to make. After all, this dissertation might add nothing to the existing literature in economics insofar as the discussion of the theoretical structure of distributive principles is concerned. However, I am not claiming that Sen's book explains everything about distributive principles: it is fair to say that the normative significance and scope of distributive principles are not fully examined in Sen's book. As I shall discuss in chapter 2, the recent philosophical debate on Prioritarianism and Egalitarianism contributes to the understanding of several issues untouched in economics. I believe that economics and philosophy complement each other in understanding distributive principles.

This dissertation is not a comprehensive study of distributive justice in general. It discusses Prioritarianism and Egalitarianism. Therefore, this dissertation is limited in scope. I should point out at least five issues I do not discuss in this dissertation. Firstly, I shall consider only the betterness of distributions. It may be argued that some distributions include some sort of wrongdoing or unfairness, and that these distributions are not ranked in terms of betterness. I do not assume that every distribution is ranked in terms of betterness. I shall limit my discussion to the distributions that are ranked in terms of betterness. What do I mean by the betterness of distributions? The task of the next section is to answer this question in order to set out my analysis of distributive principles.

Secondly, I shall not discuss the substantive concept of well-being. As I discuss in section 3, well-being is to be understood in its broadest sense. If the notion of well-being is defined sufficiently broad so as to be neutral amongst the competing notions of well-being, my discussion of distributive principles will not be affected by particular theory of well-being. That is, the distributive principles that I discuss can operate on any notion of well-being. This is an advantage of taking the notion of well-being as broadly as possible. Nonetheless, I am fully aware that the choice of concept is a very important issue in distributive justice in general.

Thirdly, I shall ignore desert, or what each person deserves. Someone might claim that equality of well-being is not the central concern of distributive justice, and that desert should be the focus of the discussion. Suppose,

for example, that there are two persons, lazy Anna and hard-working Betty. Suppose that Anna is slightly worse off than Betty. If some benefit is available, some people would claim that we should give it to hard-working Betty rather than lazy Anna. But this in turn makes the distribution of well-being more unequal. They would claim that our distributive judgement should be based on what each person deserves, not the distribution of well-being *per se*. Although the literature of desert is rapidly growing in recent moral philosophy, I shall not consider the desert in this dissertation. I shall assume either that people are equally deserving or that the notion of well-being is adjusted with desert.

Fourthly, I shall not analyze the distributions of the variable population size. The size of population may change across time, and our distributive judgement may be affected by changes in population size. However, the problem of variable population size makes the discussion of distributive judgement extremely complicated. I shall simply assume that the size of population is fixed.

Finally, I shall consider the distributive principles for outcomes, not prospects. Rabinowicz (2002, pp. 8-15) has recently argued that there is a substantial and important difference between Prioritarianism for outcomes and Prioritarianism for prospects. I agree with Rabinowicz. Many interesting issues arise when we consider distributive principles for prospects. However, Rabinowicz's paper appeared too late for me to take it into account within my dissertation. This is why I do not discuss distributive principles for prospects here.

1.1   Betterness of distributions

This dissertation is about the distribution of well-being. It is concerned with how people's well-being should be distributed. More specifically, it examines theories of betterness of distributions.

Some peoples' lives go well, others' badly. The unequal state of people's lives has given rise to a serious concern of moral philosophers. Many people believe that how people's well-being is spread should be taken into consideration when we fare how well a society is going. One way to fare how people's well-beings should be spread is to consider the relative goodness, or *betterness*, of distributions. Call principles of betterness of distributions

distributive principles.

We often have to choose how to act, or which principle to adopt, where these choices significantly affect people's well-being. By adopting one action, some people's well-being may be increased, while other people's well-being might be decreased. By adopting a different alternative, different people's well-being may be increased. Amongst those who are affected by the choice of actions or policies, there is a conflict of interests. There are many approaches to solving such a conflict, and there are therefore many moral theories. One approach appeals to the notion of betterness. We often judge that an alternative is better than another alternative, and it is right to bring about the better alternative. A distributive principle determines the ordering of alternatives in terms of the relative goodness of each alternative. Needless to say, there are many distributive principles. I will be examining two types of distributive principles: Egalitarianism and Prioritarianism.

I shall now define the betterness ordering of distributions in a precise way. I shall consider a finite number of individuals. Let $N = \{1, 2, 3, ..., n\}$ be a set of individuals who constitute society. A distribution is a list (more precisely, vector) of individuals' well-beings. Write the well-being of person $i \in N$ as w_i. Let a distribution be $(w_1, w_2, w_3, ..., w_n)$. Let $X = \{(w_1, w_2, ..., w_n) | w_i, i = 1, 2, ..., n\}$ be a set of distributions. A distributive principle imposes a betterness ordering on the distributions in a given set. That is, a distributive principle determines the betterness relation on distributions such that a distribution x is at least as good as y $(x, y \in X)$. For simplicity, I shall assume that the betterness relation of distributions is reflexive and transitive on X, and hence that it is a partial weak ordering. A betterness relation on X is *reflexive*, if and only if, for all $x \in X$, x is at least as good as x. It is *transitive*, if and only if, for all $x, y, z \in X$, if x is at least as good as y and y is at least as good as z, then x is at least as good as z. I do not require completeness here.[4] A distributive principle thus imposes a betterness ordering on the distributions in a given set.

Throughout the dissertation, I sometimes represent the goodness of a distribution by the quantitative scale. From Debreu's (1960) theorem, there exists a real-valued function $G(\ )$, which is unique up to an increasing transformation. That is, there exists a function such that $G(x) \geq G(y)$ if and

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[4]A betterness ordering on X is *complete* if and only if, for all $x, y \in X$, either x is at least as good as y or y is at least as good as x.

only if x is at least as good as y. Call this function the *goodness function*. A goodness function only preserves the ordering. That is, a goodness function represents a betterness ordering. But it does not determine one single function. If $G(\ )$ represents a betterness ordering, any increasing function of $G(\ )$ represents the same betterness ordering. The goodness function only assigns the higher value to the better distribution. The higher the value of the function, the better the distribution is considered to be. The goodness function can be linear, concave, or convex. If the goodness of a distribution x is 10 and the goodness of another distribution y is 5, it is meant that x is better than y. It is not claimed that x is twice as good as y. A goodness function $G(\ )$ represents the betterness ordering *ordinally*. In this dissertation I am concerned with the betterness ordering of distributions. I only want to judge whether a distribution is better than another. I am not concerned with how much a distribution is better than another. Therefore, a cardinal goodness function is not required here.

Some people propose a moral theory that does not fall under the theory of betterness. They argue that some distributions ought not to be brought about: some distributions are not acceptable and it is wrong to bring about such distributions, full stop. They are not concerned with whether one unacceptable distribution is better than another unacceptable distribution. They are not concerned with the betterness of distributions. Robert Nozick's (1974) side-constraint theory is an example of a moral theory of this kind. Side-constraint theory maintains a set of rules by which we judge whether a certain act or policy is wrong, without comparing the goodness of the consequences of acts. It judges the wrongness and rightness of an act without referring the goodness of the outcome the act would bring about. If one act is wrong, one ought not to do it. It is not matter whether it is better than another. Side-constraint theory itself does not have the structure of the betterness ordering. Nozick writes:

> The exercise of these rights fixes some features of the world. Within the constraints of these fixed features, a choice may be made by a social choice mechanism based upon a social ordering; if there are any choices left to make! Rights do not determine a social ordering but instead set the constraints within which a social choice is to be made, by excluding certain alternatives, fixing others, and so on. Rights do not determine the position

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of an alternative or the relative position of two alternatives in a
social ordering; they operate upon a social ordering to constrain
the choice it can yield.[5]

Here, Nozick does not deny the possibility of a betterness ordering of
alternatives. Rather, he claims, rights constrain the domain on which a
betterness ordering (or social ordering) is defined. If there are alternatives
left to be ordered, consideration of the betterness of distributions still comes
into play. But it is not his primary concern.

Some people, however, claim that wrongness can be reduced to badness.
Amartya Sen may be one of them. Sen thinks that the violation of a right
can be reduced to badness. Nozick argues that "[i]f I have a right to choose
to live in New York or in Massachusetts, and I choose Massachusetts, then
alternatives involving my living in New York are not appropriate objects to
be entered in a social ordering".[6] Nozick believes that the right to choose
whether he lives in New York or Massachusetts must be respected and that
the alternatives involving the restriction on one's right should be eliminated
from the domain of a betterness ordering. The violation of one's right is
wrong and one's right should be respected. It is not a question of good or
bad. Amartya Sen, however, thinks that wrongness can be accommodated
within the domain of goodness or betterness.

> But one can also argue that, if I believe that it is a better society
> which — given other things — lets Nozick decide where he wishes
> to live, then I must assert that it is socially better that Nozick
> should be permitted to live in Massachusetts as desired by him.
> If Nozick is forced out of Massachusetts, then one would wish to
> say not only that Nozick's rights have been violated, but that
> society is worse off — given other things — by stopping Nozick
> from living where he wishes.[7]

Here, Sen contends that the violation of a person's right is not only wrong
but also worse than non-violation of that right. That is to say, the wrongness
of an act or policy can be reduced to the badness of an alternative. If this

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[5]Nozick (1974, p. 166).

[6]Nozick (1976, p. 62).

[7]Sen (1976b, pp. 306-307). Page references are to his *Choice, Welfare and Measurement*.

is plausible, the alternatives involving some kind of wrongness are ranked in terms of betterness, and the claim of side-constraint theorist can be accommodated within the structure of the betterness (or worseness) ordering. But I shall not examine this strategy of Sen any further.[8] I will simply concentrate on the distribution of well-being, which is ranked in terms of betterness.

Exactly speaking, some distributive principles are unconcerned with how individual well-beings are distributed in the society. For example, take classical utilitarianism, according to which a distribution $x = (w_1, w_2, ..., w_n)$ is better than another $y = (w'_1, w'_2, ..., w'_n)$ if and only if the total well-being in x is greater than that in y. According to my definition, classical utilitarianism is a distributive principle, because it determines a betterness ordering of distributions. However, it does not care about distribution of well-being really. All it cares about is the total well-being, and it is unconcerned with how people's well-being is distributed in the society.

1.2 Well-being

Although I discuss the distribution of well-being, I shall not discuss which notion of well-being is the most plausible. A person's well-being is understood in the broadest sense. It should be so broad that it is neutral between competing notions of well-being.

Nonetheless, I should explain *why* I do not assume a substantive notion of well-being. There are many competing notions of well-being in moral philosophy: income, resources, primary social goods, opportunities for welfare, capability to function, happiness, net pleasure, preference-satisfaction, and so on. Each account has some advantages over others, but, at the same time, each account inevitably has some disadvantages. It is not easy to choose one over others, and the dispute over which account of well-being is most plausible seems to be endless. But this does not prevent us from discussing the distributive principles. It is not necessary to argue for a particular notion of well-being whenever we discuss distributive principles. In other words, the discussion of distributive principles are not affected by the choice of notion of well-being. It is possible to discuss distributive principles

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[8]However, I shall discuss a related issue in chapter 7, where I suggest that some notions of unfairness should be reduced to a bad.

without specifying the notion of well-being, when our notion of well-being must be broad enough to cover many notions of well-being. Once I take the notion of well-being in the broadest sense, we can discuss distributive principle without being committed to a particular notion of well-being.

I assume that a person's well-being is everything which is *good for that person*. If income is good for him, it is a part of his well-being. Similarly, if pleasure is good for him, pleasure is a part of his well-being. However, I am not assuming, for example, that a person actually experiences pleasure or pain. Suppose that the spouse of person A is cheating on person A, but person A is not aware of his spouse's affairs. As I am not assuming that the good must be experienced, I can certainly claim that the situation is worse for person A, and that his well-being is decreased. When I say that something is good for a person, I do not mean that that person has actually experienced it.

I now define an *individual* betterness relation. An individual betterness relation is a betterness relation for a person, which is defined on distributions. For example, x is at least as good for a person as y. I assume that an individual betterness relation constitutes an individual betterness (partial weak) ordering on distributions, i.e. it is reflexive and transitive.

Throughout this dissertation, I shall represent a person's well-being by a quantity: for example, I say that the well-being of person 1 in distribution x is 10. I assume that the quantitative notions of a person's well-being can be *co-cardinally* measured. In what follows, I shall explain the quantitative notions of a person's well-being.

An individual betterness ordering can be represented by a utility function $u(\ )$. A utility function $u_i(\ )$ assigns higher numerical values to each distribution, ranking the distributions in accordance with the individual betterness ordering. That is, it assigns a higher value to a better distribution for that person than a worse distribution. I call admissible transformation for all strictly increasing functions satisfying the following condition: namely that, x is at least as good for person i as y if and only if $u_i(x) \geq u_i(y)$. I use the word "utility function", but it is not committed to any particular notion of utility in philosophy. It is just a numerical representation.

As the measurement of people's well-being, I shall assume that the order and ratios of differences between the scale values are preserved. That is, if $u(\ )$ provides an admissible transformation of an individual betterness

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ordering, then $v(\ )$ provides another admissible transformation of the same individual betterness ordering if and only if there exist coefficients $a > 0$ and b such that $v(\ ) \equiv au(\ ) + b$. Precisely, a utility function is unique up to an increasing affine transformation. A utility function of this kind represents an individual betterness ordering cardinally. As an increasing affine transformation is defined as $v(\ ) \equiv au(\ ) + b$, where a is some positive number and b is any number (i.e. b can be positive or negative), $v(\ )$ is an increasing linear transform of $u(\ )$, and $u(\ )$ is an increasing linear transformation of $v(\ )$, too.

There may be many utility functions that represent an individual betterness ordering. Each utility function is an increasing linear transformation of the other utility functions. One important point to note is that amongst utility functions of the same family, ratios of value differences are determined uniquely. Consider any two utility functions u and v, and any four distributions x, y, z and w. As $v(\ ) = au(\ ) + b$, it is easy to verify that

$$\frac{u(x) - u(y)}{u(z) - u(w)} = \frac{v(x) - v(y)}{v(z) - v(w)}.$$

This means that the ratio of value differences, measured by a utility function $u(\ )$, is the same as the ratio, measured by another utility function $v(\ )$. If the utility function represents the individual betterness ordering, it preserves not only the individual betterness ordering but also the ratio of utility differences. This is the case when utility function is cardinal.

An example may be helpful. Consider the measurement of hotness. Suppose that it is hotter in a state A than in another state B, and that it is hotter in B than C. It follows that it is hotter in A than C. We can make this sort of judgment without referring to a quantitative notion of temperature, if we are sensitive enough to the hotness. But we often measure hotness by temperature, and assign a quantitative notion to hotness. For example, it is 20 degrees in the Celsius scale in A, 15 degree in B, and 10 degrees in C. The Celsius scale just preserves the ordering of our sense of hotness: we do not say that it is twice as hot in A as C. The Celsius scale assigns the higher number to the higher temperature. However, the Celsius scale is just one scale amongst others. We have, for example, the Fahrenheit scale, too. We have different measures to represent hotness. The choice of whether we use Celsius scale or Fahrenheit scale is rather arbitrary. But, if we choose the Celsius scale, the Fahrenheit scale is an increasing linear transformation

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of hotness. Our quantitative notion of hotness is determined by the choice
of scales. The choice of scale is rather arbitrary. In the temperature scale,
the choice of zero point is also rather arbitrary. In the Celsius scale, zero
point is the freezing temperature of water, and hundred point is the boiling
temperature of water. But in the Fahrenheit scale, it is not the case. We
arbitrarily fix the zero point and hundred point. In each scale, the number is
assigned some meaning arbitrarily. The choice of the scale is also arbitrary.

Likewise, the quantitative notion of well-being represents the individual
betterness ordering cardinally. When I say, for example, that a person's
well-being in x is zero, I do not mean that zero is the nonexistence of that
person or anything. Zero well-being only means that it is better than -1,
or worse than 10. The quantitative notions of well-being just assigns higher
values to a better well-being than a worse well-being in such a way that
the order and ratios of value differences are preserved. We do not need to
assume a quantitative notion of well-being before we pick one utility function
that represents an individual betterness ordering of distributions. Therefore,
for example, zero well-being does not have any significance in itself. The
values represent the order of individual betterness, but it does not stand
for absolute quantities of well-being. Whenever I represent a person's well-
being by a number, it does not signify how well off he is. It only means how
good he is. It may be misleading that I use the word "well-being" in this
dissertation, because my use of well-being does not mean the absolute level
of a person's state. It is concerned only with his state in comparison with his
another state in terms of betterness. It could be called "better-being". But
this is not a conventional English word. So I will use the word well-being.

I must assume another important point, namely interpersonal compara-
bility of well-being. I assume that a person's well-being can be fully com-
pared with another person's well-being. There is a huge literature in eco-
nomics and philosophy on whether we can compare one person's well-being
with that of another. In traditional welfare economics, it is often assumed
that a person's well-being is not compared with another's.[9] However, as
Sen (1970) notes, "nothing of much interest can be said on justice without
bringing in some interpersonal comparability".[10] In economics, there are
many notions of interpersonal comparability of well-being, and economists

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[9]For example, see Arrow (1951) and Samuelson (1947).
[10]Sen (1970, p. 150).

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work out what kind of interpersonal comparability is needed to characterize distributive principles.[11] In this dissertation, however, I simply assume that a person's well-being can be fully compared with another's.

For convenience, I list the main assumptions I make in this dissertation.

- the number of people is finite and fixed

- distributive principles are for outcomes, not for prospects

- a distribution is a vector of people's well-being

- the betterness ordering of distributions is analyzed

- a person's well-being is everything that is good for that person

- desert is not considered (people are equally deserving)

- the quantity of well-being represents the individual betterness ordering cardinally

- people's well-beings are fully comparable

1.3   Outline of dissertation

These preliminaries over, I shall sketch an outline of the dissertation.

Chapter 2 ("The structure of Prioritarianism") introduces Derek Parfit's *Prioritarianism*, and attempts to elucidate its theoretical structure. Some people think that inequality is bad in itself. Call this type of Egalitarianism *Telic Egalitarianism*. Parfit raises the *Levelling Down Objection* to Telic Egalitarianism, and then proposes Prioritarianism as an alternative distributive principle to Telic Egalitarianism. Keeping closely to Parfit, I characterize Prioritarianism by three conditions: (a) strong separability (b) Pareto, and (c) the Pigou-Dalton condition. According to Parfit, the absurdity of Telic Egalitarianism, shown in the Levelling Down Objection, is due to its *relationality*: namely that equality is concerned with the relationship, or comparison, between different people's well-beings. Then, his proposed Prioritarianism excludes the relationship, or comparison, between different

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[11]See d'Aspremont and Gevers (1977), Gevers (1979), and Roberts (1980a, 1980b).

people's well-beings. It judges the goodness of distribution by the absolute level of each person's well-being. In this sense, Prioritarianism is *non-relational.* The Objection also implies that the levelling down of the better off always makes the distribution, all things considered, strictly worse. This claim requires that any sensible distributive principle should satisfy what I call Pareto. Parfit claims that we should give priority to those who are at a lower absolute level. This is because he maintains that the goodness of a person's well-being diminishes as the absolute level of his well-being gets higher. The basic claims of Prioritarianism are: (a′) the moral goodness of people's well-being is determined independently of relative positions of others; and (b′) benefiting a worse off person (in the absolute sense) is more important than benefiting a better off person. I argue that strong separability best exemplifies (a′), and that the Pigou-Dalton condition best exemplifies (b′). I consider distributive principles that give complete priority to the worse off or worst off person (Maximin and Leximin), and suggest that Leximin may be seen as a version of Prioritarianism, if Prioritarians agree to replace the Pigou-Dalton condition by what is known as Hammond equity. I also discuss the significance of the recent philosophical discussion of Prioritarianism. In economics, the distributive principle of giving priority to the worse off is not new. There exists a large literature on such principles in economics. I show what is new with Parfit's Prioritarianism.

Chapter 3 ("Priority and Threshold") examines a possible criticism to Prioritarianism. Some people might object to Prioritarianism because it would give priority to the worse off, even when the worse off person is very well off. They would claim that we should not care about priority amongst the well off people, and that we should give priority to those below a certain low level of well-being over those above. I propose what I call the *Threshold Principle*, which gives priority to those below the threshold level over those above. I consider two versions of the Threshold Principle, Lexical and Continuous Threshold Principles. The former does not allow a trade off between well-being above the threshold and the well-being below. On the other hand, the latter allows such trade offs. I argue that the Threshold Principle, be it Lexical or Continuous, is not inconsistent with Parfit's Prioritarianism. The Threshold Principle may be seen as a version of Prioritarianism. The discussion in this chapter clarifies the far-reaching scope of Prioritarianism.

Chapter 4 ("On Levelling Down") starts my defence of Telic Egalitari-

anism. According to Parfit, Telic Egalitarianism is subject to the Levelling Down Objection, whereas his proposed Prioritarianism is not. Therefore, in Parfit's argument, the Levelling Down Objection demonstrates a relative advantage of Prioritarianism over Telic Egalitarianism. However, if it is shown that the Levelling Down Objection is not a serious problem to some versions of Telic Egalitarianism, the Levelling Down Objection no longer demonstrates a relative advantage of Prioritarianism over Telic Egalitarianism. In this chapter, I show that some versions of Telic Egalitarianism avoid the Levelling Down Objection. Although the Levelling Down Objection is a serious objection to some versions of Telic Egalitarianism, it is not to my proposed *Weighted Egalitarianism*, according to which the bad of inequality is reduced to the weight of individual well-being in the overall goodness of a distribution. The Objection only applies when the bad of inequality cannot be reduced to the weight of people's well-being. A positive message of the Levelling Down Objection might be that whenever equality is believed to be valuable in itself, one should adopt Weighted Egalitarianism.

Chapter 5 ("Weighted Egalitarianism or Prioritarianism?") puts forward the general form of Weighted Egalitarianism, and explains its characteristics. It clarifies the exact difference between Weighted Egalitarianism and Prioritarianism, and argues that Weighted Egalitarianism is more acceptable than Prioritarianism. It shows that Weighted Egalitarianism satisfies the Pigou-Dalton condition, namely that Weighted Egalitarianism gives priority to the worse off just like Prioritarianism. It also satisfies Pareto. However, it violates strong separability. Then, I suggest an interpretation that the difference between Prioritarianism and Weighted Egalitarianism is that, in Prioritarianism, the weight to each well-being is determined by an independent measure, whereas in Weighted Egalitarianism, it is determined by the rank-order position of the person in the ranking by well-being level. In this respect, I shall raise two objections about Prioritarianism. I shall also consider two possible objections to Weighted Egalitarianism, and argue that these two objections do not undermine Weighted Egalitarianism. However, I point out that if Prioritarians adopt Leximin by replacing the Pigou-Dalton condition by Hammond equity, they can avoids my criticisms. Leximin does not allow a trade off between the better off and the worse off, and this makes Leximin hard to adopt.

Chapter 6 ("Equality, Priority and Time") considers intertemporal dis-

tribution of well-being. Some influential political philosophers such as John Rawls, Thomas Nagel, and Ronald Dworkin, maintain the lifetime view of distributive judgement, according to which the basic temporal unit of distributive judgement is people's lifetime well-being. I reject this lifetime view, be it Egalitarian or Prioritarian. Some Prioritarians believe (a) that the basic unit of distributive judgement should not be lifetime well-being, and (b) that the rejection of the lifetime view of distributive judgement illuminates that Prioritarianism is more acceptable than Telic Egalitarianism. In this chapter, I reject this case for Prioritarianism. I claim that both the distribution of lifetime well-being and the distribution at each temporal stage are relevant for any distributive principle, be Prioritarianism or Weighted Egalitarianism. I further claim that Prioritarianism has philosophical difficulty in assigning the moral weight to the lifetime well-being and the well-being at each period at the same time, although this is not a knock-out argument against Prioritarianism.

Chapter 7 ("Aggregation and Numbers") considers the scope of distributive principles, that gives priority to only one person. Leximin avoids my criticisms of Prioritarianism, but it has a drawback that it rules out the trade off between the better off and the worse off. However, this very feature of Leximin may obtain a support from non-Prioritarians: the critics of interpersonal aggregation in general and the critics of utilitarianism in particular. They believe that interpersonal aggregation of well-being violates the separateness of persons, and that a plausible distributive principle should give priority to only one person, or group, in order to avoid interpersonal aggregation (for example, Rawls's Difference Principle, Nagel's pairwise comparison, and Scanlon's contractualism). Recently, non-aggregative principles have been criticized because they fail to account for the numbers in a particular choice situation: faced with a choice between saving five strangers and saving another stranger (the rescue case), those principles advocate tossing a coin to decide whom we should save. In this chapter, I argue that a non-aggregative version of Prioritarianism, Leximin, can support the case for saving the greater number without appealing to interpersonal aggregation. I also discuss Scanlon's contractualism as another non-aggregative theory in favour of saving the greater number. Nonetheless, I raise a further question as to whether we should *always* save the greater number. I doubt that we should save the greater number when we are faced with a choice between

saving 1,000 lives and 1,001 lives. In this large scale rescue case I believe that we should toss a coin. I propose a theoretical framework within which we should save the greater number in some cases, yet should toss a coin in other cases. Some people defend a principle of giving priority to only one person in order to avoid the allegedly implausible feature of interpersonal aggregation and to respect each person equally and separately. However, I believe that interpersonal aggregation is not the right target of criticism of non-utilitarians. Interpersonal aggregation is useful to encompass the equal respect to separate person.

Chapter 2

The Structure of Prioritarianism

2.1 Introduction

Some peoples' lives go well. Others' badly. The unequal state of peoples' lives has given rise to a serious concern of moral philosophers, namely that the distribution of people's well-being should be taken into consideration when we fare how well a society is going. Amongst those who hold this concern, the most well-known is Egalitarianism. Egalitarianism maintains that equality should play a role in some way when we fare how the society is going. There are many types of Egalitarianism. Some Egalitarians believe that equality is valuable in itself, and that it is in itself bad if some people are worse off than others. Call this type of Egalitarianism *Telic Egalitarianism*, which I shall be examing in this dissertation. Other Egalitarians believe that inequality is unfair or unjust: they do not think that inequality is a bad. I shall not consider Egalitarianism of this kind.

In an important paper, Derek Parfit (1995) raises the *Levelling Down Objection* to Telic Egalitarianism, and proposes the Priority View, or *Prioritarianism*. According to Parfit, equality is *not* valuable in itself. Instead, Parfit claims that priority should be given to those who are at a lower absolute level. He claims that his proposed Prioritarianism is not subject to the Levelling Down Objection. Parfit's Prioritarianism has received extensive attention in recent years,[1] but the reach of its theoretical structure has not

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[1] For discussion in support of Prioritarianism, see Arneson (1993, 1999) and McKerlie

yet been made sufficiently clear.

The main goal of this chapter is to elucidate the structure of Prioritarianism. I shall not criticize or defend Prioritarianism in this chapter. I only attempt to formulate it in a precise way. Keeping closely to Parfit (1995), I formulate Prioritarianism by way of three conditions: strong separability, Pareto, and the Pigou-Dalton condition. Section 2 introduces the basic idea of Telic Egalitarianism and Parfit's objection to Telic Egalitarianism. Section 3 explains strong separability. Section 4 explains Pareto. Section 5 explains the Pigou-Dalton condition. Section 6 considers whether two distributive principles that give priority to only one person, i.e. Maximin and Leximin, can be seen as a version of Prioritarianism. I shall argue that Leximin may be seen as a version of Prioritarianism if Prioritarians are ready to replace the Pigou-Dalton condition by what is known as "Hammond equity". Section 6 discusses what Parfit's Prioritarianism has added to the existing economic literature on the distributive principles that gives priority to the worse off.

2.2 Telic Egalitarianism and the Levelling Down Objection

Parfit's Prioritarianism is motivated by the Levelling Down Objection to Telic Egalitarianism. I will start by defining Telic Egalitarianism that Parfit has in mind, and then turn to his Levelling Down Objection in order to see the motivation behind Prioritarianism.

There are many types of Egalitarianism. Some Egalitarians believe that we should reduce inequality because it is bad in itself. Other Egalitarians believe that we should reduce inequality because it is unfair or unjust. The former type of Egalitarians believes in what Parfit calls the *Principle of Equality*.

The Principle of Equality: It is in itself bad if some people

(1994, 1996). For critical discussion, see Broome (1993, ch. 9), Crisp (2002), Klint Jensen (1996), Rabinowicz (2002), and Temkin (1993, ch. 9). It should be noted that there is a separate discussion as to whether Prioritarianism is substantially different from Telic Egalitarianism. Marc Fleurbaey (2001) and Daniel Hausman (2001) think that the distinction between Prioritarianism and Telic Egalitarianism is not substantially useful. John Broome (2001), on the other hand, claims that it is useful.

are worse off than others.[2]

I do not discuss whether the Principle of Equality is a necessary or sufficient condition for Telic Egalitarianism. I simply follow Parfit's presentation here.

Consider a distributive principle that is based only on the Principle of Equality. Call such principle *Pure Egalitarianism*. Few people would think that Pure Egalitarianism is plausible, because it is too extreme. To illustrate how extreme it is, compare two distributions, $x = (200, 200)$ and $y = (100, 100)$, where the brackets show the well-being of persons 1 and 2. In this comparison, Pure Egalitarianism would judge that x is equally as good as y, because people's well-beings are perfectly equal in x and y. By definition, Pure Egalitarianism cares only about equality. But it is absurd to judge that x is equally as good as y. It should be judged that x is strictly better than y. This is because x is strictly better for both persons than y, and hence the total well-being is greater in x than y. Any sensible form of Telic Egalitarianism should combine the Principe of Equality with what Parfit calls the *Principle of Utility*.

> **The Principle of Utility**: It is in itself better if people are better off.[3]

According to Parfit, if we care only about the Principle of Utility, we would be Pure Utilitarians.[4] On Parfit's interpretation, the Principle of Utility means the total sum of people's well-being.

When the Principle of equality is combined with the Principle of Utility, $x = (200, 200)$ is judged to be better than $y = (100, 100)$. Telic Egalitarianism means a class of distributive principles that satisfy both the Principle of Equality and the Principle of Utility. This is what Parfit has in mind. I say "a class of distributive principles", because, as I shall discuss in chapter 4, there are many versions of Telic Egalitarianism, that satisfy these two principles.

Parfit then raises the *Levelling Down Objection* to Telic Egalitarianism.[5] *Levelling down* means that the well-being of a better off person is lowered

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[2]Parfit (1995, p. 4).
[3]Parfit (1995, p. 4).
[4]Parfit (1995, p. 4).
[5]Parfit (1995, p. 17).

to the level of a worse off person without benefiting any person. Parfit points out that if equality is valuable in itself, levelling down is, at least in one respect, better. Telic Egalitarianism, Parfit therefore claims, judges that levelling down is, at least in one respect, better. However, he believes that it is *not* better in *any* respect, and that this implication of Telic Egalitarianism is absurd. This is Parfit's Levelling Down Objection to Telic Egalitarianism. Parfit writes:

> If inequality is bad, its disappearance must be in one way a change for the better, *however this change occurs.* Suppose that those who are better off suffer some misfortune, so that they become as badly off as everyone else. Since these events would remove the inequality, they must be in one way welcome, on the Telic View [Telic Egalitarianism], even though they would be worse for some people, and better for no one. This implication seems to many people to be quite absurd.[6]

To illustrate the gist of Parfit's claim, compare $x=(100, 100)$ and $y=(200, 100)$. For person 1, x is strictly worse than y. For person 2, x is equally as good as y. Therefore, x is not better than y for either person. However, if equality is valuable in itself, it is argued that x is, at least in one respect, better than y. This is because x is a perfectly equal distribution, whereas y is not. According to Parfit, Telic Egalitarianism would judge that levelling down is, at least in one respect, better. However, it may be claimed that x is not better than y in any respect. If this is the case, Telic Egalitarianism may turn out to be absurd.

Let us clarify more precisely what the Levelling Down Objection implies. Telic Egalitarians believe in the Principle of Equality and Principle of Utility. According to the Telic Egalitarianism Parfit objects to, the goodness of a distribution is determined by the bad of inequality and the total sum of people's well-being. This is formally expressed as follows.

$$G = g(W, I), \qquad (2.1)$$

where W is the aggregated well-being across people, I is some inequality measure, and $g(\ )$ is a function increasing in W and decreasing in I.

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[6]Parfit (1995, p. 17). Original emphasis.

In this expression, W represents the Principle of Utility and I represents the Principle of Equality. The overall good of a distribution is determined by the aggregated well-being, W, and some inequality measure, I. Given the total sum of people's well-being and some measure of inequality, the function $g(\ )$ establishes how much W and I count in the overall good of a distribution. There is a trade-off between the goodness of total sum of people's well-being and the badness of inequality. The function $g(\ )$ determines this trade off between the goodness of total sum of people's well-being and the badness of inequality. For example, if the overall good of a distribution is represented by an additive form, it is the case that $G = W - \alpha I$, where α is some positive number.

By the levelling down of a better off person, W is decreased, and I is decreased. On balance, the levelling down may be worse, all things considered. However, it may be better in terms of I, because the value of I is decreased by levelling down. According to Telic Egalitarianism understood as (2.1), levelling down is, in one respect, better. As Parfit claims, Telic Egalitarianism may be absurd.

There may be several responses to the Levelling Down Objection. Firstly, some people take the Levelling Down Objection seriously, and give up the notion of Telic Egalitarianism. Then, they seek for an alternative distributive principle. This is Parfit's own response. Parfit thinks that the levelling down of a better off person to the level of a worse off person is not better in any respect. He thinks that there is no respect with regard to which the outcome is made better by levelling down. Then, he sets aside the idea that inequality is bad in itself, and seeks for an alternative distributive principle, i.e. Prioritarianism.

Secondly, some people simply do not care about the Levelling Down Objection, because the idea underlying the Levelling Down Objection is not plausible. This is, for example, Larry Temkin's response. Temkin (1993, 2000) thinks that the Levelling Down Objection appeals to what Temkin calls *Slogan*. According to Temkin, the Slogan claims that one situation cannot be worse (or better) than another situation in any respect if there is no one for whom it is worse (or better) in any respect.[7] He thinks that we should distinguish between theories about self-interest and theories about outcomes, and that once this distinction is made, there is reason to doubt

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[7] Temkin (2000, p. 136).

the Slogan and the arguments invoking it. He then rejects the Slogan, and does not care about whether or not levelling down is better in some respect. He might think that the outcome is made better by levelling down in some circumstances. I shall not discuss Temkin's argument against the Slogan any further here.

Thirdly, some people argue that, like Parfit, levelling down is not better in any respect. However, they argue that the Levelling Down Objection is serious to some versions of Telic Egalitarianism, but not serious to other versions of Telic Egalitarianism. The Levelling Down Objection clarifies what sort of Telic Egalitarianism is more plausible than other versions of Telic Egalitarianism. This is my own response. There are several versions of Telic Egalitarianism, and some versions of Telic Egalitarianism do not have a respect with regard to which the outcome is made better by levelling down. I shall discuss this response in chapter 4.

Let us turn to the examination of Parfit's Prioritarianism, along the line of the first response.

2.3 Strong separability

The Levelling Down Objection against Telic Egalitarianism motivates Parfit to propose his Prioritarianism. His proposed Prioritarianism is this.

> **Prioritarianism (informal definition):** Benefiting people matters more the worse off those people are.[8]

This definition needs to be made more precise. I shall argue that Prioritarianism consists essentially in three claims: (a) the goodness of people's well-being should be determined independently of other people's well-being, and (b) levelling down always makes the distribution, all things considered, strictly worse, and (c) the well-being at a lower absolute level should be assigned more weight than the well-being at a higher absolute level in judging the goodness of a distribution. I then argue that these claims are best captured by strong separability, Pareto, and the Pigou-Dalton condition.

I start with explaining the first claim, i.e. strong separability. Parfit wants to avoid the Levelling Down Objection. In order to do so, he sets aside the claim that equality is valuable. Telic Egalitarianism is concerned with

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[8]Parfit (1995, p. 19).

the goodness of equality, or the badness of inequality. In the Levelling Down Objection, the goodness of equality, or the badness of inequality, provides a respect with regard to which levelling down is better. Equality is about the relationship between different people. Then, Parfit rules out the relational, or comparative, element from the relevant consideration in evaluating the overall goodness of a distribution. His proposed distributive principle is intended to be *non-relational*, or non-comparative. For this purpose, he sets out Prioritarianism such that the goodness of a distribution is determined by the absolute level of people's well-being. He writes:

> The chief difference [between Prioritarianism and Telic Egalitarianism] can be introduced like this. I have said that, on the Priority View, we do not believe in equality. We do not think it in itself bad, or unjust, that some people are worse off than others. This claim can be misunderstood. We do of course think it bad that some people are worse off. But what is bad is not that these people are worse off than *others*. It is rather that they are worse off than *they* might have been.[9]

He goes on:

> on the Priority View, benefits to the worse off matter more, but this is only because these people are at a lower *absolute* level. It is irrelevant that these people are worse off *than others*. Benefits to them would matter just as much even if there *were* no others who were better off.
>
> The chief difference is, then, this. Egalitarians are concerned with *relativities*: with how people's level compares with the level of other people. On the Priority View, we are concerned only with people's absolute levels.[10]

Parfit maintains that how good the benefits to a person are should be determined only by the absolute level of his own well-being. It should not be concerned with the relationship between different people's well-being. The goodness of people's well-being should be determined independently of the well-being of other people. According to Prioritarianism, people are worse

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[9]Parfit (1995, p. 22). Original emphasis.
[10]Parfit (1995, p. 23). Original emphasis.

off in the sense that they are worse off than they might have been, rather than that they are worse off than others: people are worse off in absolute, not relative, terms.

The idea that the goodness of people's well-being should be determined independently of other people's well-being is, I think, best captured by the technical notion of *strong separability* in economics. Strong separability claims that, in the case of distributive judgement, the goodness of people's well-being is determined independently of other people.

To capture the gist of strong separability, consider the distributions $x = (10, 12, w_3, w_4, w_5)$ and $y = (11, 11, w_3, w_4, w_5)$. Strong separability claims that the relative goodness of x and y is determined by the relative goodness of (10,12) and (11,11). Only when we judge (10,12) is better than (11,11), then strong separability claims that x is better than y, regardless of the level of (w_3, w_4, w_5). That is to say, $x = (10, 12, w_3, w_4, w_5)$ is better than $y = (11, 11, w_3, w_4, w_5)$ only if $x' = (10, 12, w_3', w_4', w_5')$ is better than $y' = (11, 11, w_3', w_4', w_5')$, for all w_i and w_i'. According to strong separability, we can concentrate on the well-beings of affected people, and the relative goodness of distributions is determined independently of the well-being of the unaffected people.

Let me define strong separability in a precise way. Let me start with introducing a formal framework concerning the overall good of a distribution. First, we shall consider a set of individuals $N = \{1, 2, ..., n\}$ and a set of possible well-being W. Let us assume that a distribution is a vector of people's well-being. A distributive principle determines a betterness ordering of distributions, which is assumed to be a reflexive and transitive, binary relation on $X^n = \{(w_1, w_2, ..., w_n) | w_i \in W, i = 1, 2, ..., n\}$. If a betterness ordering of distribution is continuous, it can be represented by a goodness function $g(\ )$, where a distribution x is at least as good as another y if and only if $g(x) \geq g(y)$.

We have paved the way to define strong separability precisely. Take some subset of people A, and let $\bar{A} = N - A$ be the set of people other than A. Let us call the vector of well-being of people in A, i.e. $(w_i)_{i \in A}$, a *subvector*. Given $w_{\bar{A}}$ constant, the betterness relation defines the betterness relation of the subvectors. I shall call the latter *conditional betterness ordering*. If the conditional betterness ordering on the subvectors $(w_i)_{i \in A}$ is the same for all $w_{\bar{A}}$, A is said to be *separable*. A betterness ordering is *weakly separable*

if and only if every person is separable. A betterness ordering is *strongly separable* if and only if every subset of persons is separable.[11] This is the formal definition of strong separability.

Not surprisingly, strong separability may not be accepted by Telic Egalitarians. For example, comparing $x = (10, 12, 12, 12, 12)$ and $y = (11, 11, 12, 12, 12)$, some Telic Egalitarians would judge that x is better than y. But, comparing $x' = (10, 12, 11, 11, 11)$ and $y' = (11, 11, 11, 11, 11)$, they would claim that y' is better x'. But strong separability requires that just in case x is judged to be better than y, x' is judged to be better than y'. Thus, Telic Egalitarians may violate strong separability, and disagree with Parfit's idea of "non-relationality". This is not surprising at all. Telic Egalitarianism is concerned with equality, and equality is concerned with the relationship between people. It is, by definition, relational. Thus, it is not surprising even if Telic Egalitarianism violates strong separability. I shall come back to this issue in chapter 5.

It is easy to show that classical utilitarianism satisfies strong separability. Classical utilitarianism claims that $x = (w_1, w_2, ..., w_n)$ is at least as good as $y = (w'_1, w'_2, ..., w'_n)$ if and only if $G(x) = w_1 + w_2 + ... + w_n \geq G(y) = w'_1 + w'_2 + ... + w'_n$. It cares only about the total well-being, and does not care about how people's well-beings are distributed. Take some subset of persons, $A \subset N$. When we keep the well-being of the other people constant, the relative goodness of distributions is determined by the relative goodness of total amount of well-being of A. Classical utilitarianism satisfies strong separability and is thus non-relational.

According to classical utilitarianism, the goodness of distribution is an additive function of people's well-being. It is also strongly separable, and thus non-relational. I should introduce the notion of *additive separability* here. If and only if an ordering is additively separable, it is represented by an additive function: namely that $x = (w_1, w_2, ..., w_n)$ is at least as good as $y = (w'_1, w'_2, ..., w'_n)$ if and only if $G(x) = g_1(w_1) + g_2(w_2) + ... + g_n(w_n) \geq G(y) = g_1(w'_1) + g_2(w'_2) + ... + g_n(w'_n)$.[12] Additive separability entails strong separability, but not *vice versa*. If an ordering is strongly separable *and* continuous, then it is additively separable. But if an ordering is strongly separable but discontinuous, it cannot be represented by a functional form,

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[11]For the far-reaching scope of separability in ethics, see Broome (1991, ch. 4).

[12]See Debreu (1959).

or, therefore, by an additive form.

2.4 Pareto

Let's go back to the Levelling Down Objection again. The Levelling Down Objection claims that levelling down is not better in any respect. However, suppose that levelling down is better at least in one respect. If this is true, there must be some cases, where the increase in the goodness of this respect outweighs the decrease in the goodness of other respects if we assign a sufficiently large weight to the bad of inequality.[13] In other words, there must be some cases, where the increase in the goodness of reducing inequality outweighs the decreases in the goodness of total well-being. In turn, this implies that levelling down sometimes makes the distribution, all things considered, strictly better. Of course, those who are concerned with the Levelling Down Objection wish to rule out this possibility. By claiming that levelling down is not better in any respect, the Levelling Down Objection implicitly implies that levelling down always makes the distribution, all things considered, strictly worse. Many people would agree that any reasonable distributive principle should be sensitive to levelling down in terms of the all-things-considered judgement. The idea behind this claim is what I call *Pareto*.

> **Pareto**: if a distribution is strictly worse (better) for some people than another distribution and if it is better (worse) for no person, then it is, all things considered, strictly worse (better) than the other.

We should note the following, too. The claim that moving from y to x is, all things considered, strictly worse is equivalent to the claim that moving from x to y is, all things considered, strictly better. That is, the levelling up of a person's well-being, keeping other people's well-beings constant, makes the outcome, all things considered, strictly better. Thus, Pareto is seen to support the positive responsiveness of the all-things-considered judgement to the change of a person's well-being, when other people's well-beings are constant.

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[13]In chapter 4 section 6, I will discuss that this is not the case if we restrict the scope of equality. However, it is true as far as equality is understood to be always valuable.

Some egalitarian (not necessarily Telic Egalitarian) principles avoid the Levelling Down Objection, yet do not judge that levelling down makes the outcome, all things considered, strictly worse. One example is Maximin, according to which the relative goodness of distributions is judged entirely by the level of the worst off people across distributions. It judges that a distribution x is at least as good as y if and only if the well-being of the worst off in x at least as high as that in y: it gives absolute priority to the worst off. As it focuses on the worst off, the well-being of the non-worst off people does not affect its distributive judgement. The levelling down of a better off person does not affect a judgement on the relative goodness of distributions so long as the well-being of the worst off remains at the same level. Compare $x = (100, 100)$ and $y = (200, 100)$. Maximin judges that x is equally as good as y, all things considered. It claims that there is no respect with regard to which levelling down is better, namely that x is *not* better in any respect. However, moving from y to x is levelling down. Maximin implies that levelling down is not better in any respect. Maximin thus avoids the Levelling Down Objection. However, Maximin does not judge that x is strictly worse than y. It violates Pareto.[14] Maximin is insensitive to levelling down in terms of the all-things-considered judgement.

2.5   The Pigou-Dalton condition

I now turn to the third claim of Prioritarianism, i.e. the Pigou-Dalton condition. Parfit does not think that equality is valuable in itself. Instead, he claims that the well-being of a worse off person counts more than the well-being of a better off person, i.e. "[b]enefiting people matters more the worse off those people are". He explains the idea of giving priority to the worse off by what he calls *the law of diminishing moral goodness*.

> We believe that, if benefits go to people who are better off, these benefits matter less. Just as *resources* have diminishing marginal *utility*, so *utility* has diminishing marginal *moral importance*. Given the similarity between these claims, there is a second similar argument in favour of equality: this time, not of resources, but of well-being. On this argument, whenever we

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[14]Parfit himself thinks that Maximin is too extreme, even though he believes that Maximin is a version of his proposed Prioritarianism. See Parfit (1995, pp. 35-39).

transfer resources to people who are worse off, the resulting benefits will not merely be, in themselves, greater. They will also, on the moral scale, matter more. There are thus two ways in which the outcome will be better.[15]

In Prioritarianism, giving a benefit to a worse off person has greater moral significance than giving the same benefit to a better off person. The idea of the law of diminishing moral goodness is depicted in figure 1.

Place figure 1. (The figure is attached to the end of this dissertation).

The figure shows that the goodness of well-being diminishes as the absolute level of well-being gets higher. The curve is strictly increasing, but bends downwards. The shape of this curve is known as *strict concavity* in economics.[16]

In order to capture the gist of the law neatly, let us put it formally. Parfit claims that "if benefits go to people who are better off, these benefits matter less". This means that the increase in the good derived from the benefit e is greater for lower well-being than for higher well-being. This can be put as follows: $g(w_1 + e) - g(w_1) < g(w_2 + e) - g(w_2)$ for $w_1 > w_2$ and some benefit $e > 0$. That is to say, the additional good derived from giving some benefit, e, to the worse off person is greater than the additional good derived from giving e to the better off person. According to Prioritarianism, giving some benefit to a worse off person yields more good than giving it to a better off person.

Suppose that we can transfer some benefit from one person to another person, keeping other peoples' well-being constant. If we transfer some

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[15]Parfit (1995, p. 24). Original emphasis.

[16]There are two different cases of strict concave curve. The one is that the goodness of well-being increases to infinity. That is, the curve is not bounded above, and goes up infinitely. In this case, there is no limit in the value of goodness of well-being. The other case is that the goodness of well-being strictly increases but approaches to a certain finite limit, which Frank Ramsey (1928) called the *bliss*. In this case, the curve approaches to bliss indefinitely, but never goes up above bliss. That is, the value in the goodness of well-being is bounded above. This is an important distinction in economics, and it may be a philosophically interesting question whether there is a limit level of goodness of well-being. However, for the present purpose, I do not need to discuss whether or not the goodness of well-being is bounded above.

benefit from the better off person to the worse off person, it makes the outcome better, all things considered. The outcome gets better and better as we make the transfer of benefit from a better off person to a worse off person. Call this transfer of the benefit from a better off person to a worse off person the *equalizing transfer*. The equalizing transfer makes the outcome better up to the point where the well-beings of two persons are completely equalized. The same process of equalizing transfer applies to any pair of well-being. Thus, in Prioritarianism, the series of equalizing transfer makes the outcome better up to the point where everyone's well-being is at the same absolute level. Thus, although Parfit refrains from the claim that equality is valuable in itself, in his proposed Prioritarianism, equality is a property that makes the outcome better. Parfit writes:

> On the definition with which I began, the Priority View is not Egalitarian. On this view, though we ought to give priority to the worse off, that is not because we shall be reducing inequality. We do not believe that inequality is, in itself, either bad or unjust. but, since this view has a built-in bias towards equality, it could be called Egalitarian in a second, looser sense. We might say that, if we take this view, we are *Non-Relational Egalitarians*.[17]

In Prioritarianism, equality increases the goodness of a distribution without increasing the total well-being. To put this the other way round, keeping the total well-being constant, a more equal distribution is better than less equal one. Formally, if we assume that the betterness ordering can be represented by an additive function, it is equivalent to: if $w_1 + w_2 = w_1' + w_2'$ and $|w_1 - w_2| < |w_1' - w_2'|$, then $g(w_1) + g(w_2) > g(w_1') + g(w_2')$. This follows when the function $g(\ )$ is strictly concave.

The law of diminishing moral goodness thus understood is known as the *Pigou-Dalton condition* in economics. The Pigou-Dalton condition claims the following. Suppose that we can transfer a fixed amount of benefit from a better off person to a worse off person without altering the relative position of the two and without decreasing the total well-being. Then, the after-transfer distribution is better than the before-transfer distribution. Many economists believe that the Pigou-Dalton condition is a desirable condition

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[17]Parfit (1995, p. 25). Original emphasis.

for the inequality measure, and that, as I shall discuss in section 6, egalitarian social welfare function should satisfy this condition.[18] This is because they believe that, other things being equal, the transfer of income from a better off person to a worse off person reduces the overall income inequality in the society. Economists usually understand the Pigou-Dalton condition in terms of income. However, needless to say, I use the Pigou-Dalton condition in terms of well-being.

One might wonder how Parfit can possibly claim to give priority to the worse off, if he is committed to the idea of non-relationality. According to Parfit, a person is worse off in the sense that he is worse than what he might have been. He is not worse off in the sense that he is worse off than others. So, in Prioritarianism, a person is worse off, because he is at a lower absolute level. Parfit claims that we should give priority to the people at a lower absolute level. This is the difference between Telic Egalitarianism and Prioritarianism with regards to the use of "worse off".

Now, I propose the formula of Prioritarianism. The general form of Prioritarianism is given by (a) strong separability and (b) the Pigou-Dalton condition. More specifically, Prioritarianism is characterized by (a$'$) additive separability and (b$'$) strict concavity.

> **Prioritarianism (formal definition)**: a distributive principle is Prioritarianism if it satisfies strong separability, Pareto, and the Pigou-Dalton condition.

A typical formula of Prioritarianism is that $x = (w_1, w_2, ..., w_n)$ is at least as good as $y = (w_1', w_2', ..., w_n')$ if and only if $G(x) = g(w_1) + g(w_2) + ... + g(w_n) \geq G(y) = g(w_1') + g(w_2') + ... + g(w_n')$, where $g(\ )$ is an increasing, strictly concave function. It is easy to verify that this formula above satisfies both strong separability, Pareto, and the Pigou-Dalton condition. One example of this formula is the sum of the square-root function of individual well-being: namely that $x = (w_1, w_2, ..., w_n)$ is at least as good as $y = (w_1', w_2', ..., w_n')$ if and only if $G(x) = \sqrt{w_1} + \sqrt{w_2} +, ..., + \sqrt{w_n} \geq G(y) = \sqrt{w_1'} + \sqrt{w_2'} +, ..., + \sqrt{w_n'}$. It is easy to verify (a) that the goodness of a subset of people's well-being is determined independently of the other people's well-being, (b) that levelling down always makes the distribution, all things considered, strictly worse, and (c) that the individual component

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[18]See Cowell (1995, p.55), and Sen and Foster (1997).

of overall good diminishes as the well-being gets higher. Another, rather unclear, example is what economists call the *Nash social welfare function*. The Nash social welfare function judges relative goodness by the product of individual well-being: namely that $x = (w_1, w_2, ..., w_n)$ is at least as good as $y = (w'_1, w'_2, ..., w'_n)$ if and only if $G(x) = w_1 \times w_2 \times ... \times w_n \geq G(y) = w'_1 \times w'_2 \times ... \times w'_n$. On the face of it, it is not an additive function or a strictly concave function. However, if we take the logarithm, we have: $x = (w_1, w_2, ..., w_n)$ is at least as good as $y = (w'_1, w'_2, ..., w'_n)$ if and only if $\log G(x) = \log w_1 + \log w_2 + ... + \log w_n \geq \log G(y) = \log w'_1 + \log w'_2 + ... + \log w'_n$. Since the log function is strictly concave, the formula is an additive and strictly concave function. The Nash social welfare function is a version of Prioritarianism.

2.6 Giving complete priority

One might wonder if my definition of Prioritarianism above could include principles that give complete priority to the worse off or the worst off as a version of Prioritarianism. I shall consider two distributive principles. The first is Maximin. Maximin claims that we should give *absolute* priority to the *worst off*. The other is Leximin. Leximin claims that we should give *lexical* priority to the *worse off*. These principles give complete priority to the worst off or the worse off and, on the face of it, each principle seems to be a version of Prioritarianism, because each can be phrased as "giving priority to the worst/worse off". Let me examine each principle in the light of my formal definition.

Maximin became well-known after Rawls (1971) used it as an underlying idea in his Difference Principle. Here I discuss Maximin itself: it is different from Rawls's Difference Principle. This is because in Rawls's argument (a) the Difference Principle must be used with other principles of justice, (b) it applies to the basic structure of society, (c) it applies to the representative member of the worst off group, and (d) the informational basis of distributive judgement is the bundle of primary social goods.

Maximin is defined as follows: a distribution x is at least as good as y if and only if the well-being level of the worst off person in x is at least as high as that in y. More formally, $x = (w_1, w_2, ..., w_n)$ is at least as good as $y = (w'_1, w'_2, ..., w'_n)$ if and only if $\min\{w_1, w_2, ..., w_n\} \geq \min\{w'_1, w'_2, ..., w'_n\}$.

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On the face of it, Maximin seems to be a version of Prioritarianism, since it is usually phrased as "giving absolute priority to the worst off". However, this is not so obvious. It is not a version of Prioritarianism in the light of my formal definition. Maximin satisfies none of strong separability, Pareto, and the Pigou-Dalton condition. To see that Maximin violates strong separability, consider two comparisons:

case 1: $x = (5, 10, 20, 20, 20)$ $\quad y = (7, 10, 20, 20, 20)$

case 2: $x' = (5, 10, 5, 5, 5)$ $\quad y' = (7, 10, 5, 5, 5)$.

In these comparisons, strong separability claims that the relative goodness of x and y is determined independently of the well-being of persons 3, 4, and 5. It claims that x is better than y if and only if x' is better than y', or that y is better than x if and only if y' is better than x'. In case 1, Maximin judges that y is better than x. In case 2, it judges that x' and y' are equally good. However, strong separability claims that if y is better than x in case 1, then y' is better than x' in case 2. Thus, Maximin violates strong separability. It is not non-relational, because we cannot judge the relative goodness of distributions unless we consider the well-being of all people.

As I discussed in section 4, Maximin violates Pareto. To remind, compare $x = (100, 100)$ and $y = (200, 100)$. Maximin judges that x is equally as good as y, whereas Pareto claims that y is strictly better than x. Thus, Maximin violates Pareto.

Finally, let me show that Maximin violates the Pigou-Dalton condition. Compare $x = (50, 20, 10)$ and $y = (40, 30, 10)$. Maximin judges that x and y are equally good, whereas the Pigou-Dalton condition claims that y is better than x. Thus, Maximin violates the Pigou-Dalton condition. As Maximin violates strong separability, Pareto, and the Piguo-Dalton condition, it cannot be seen as a version of Prioritarianism.

What about Leximin? Leximin is the lexicographical extension of Maximin. According to Leximin, a distribution x is better than y if and only if the well-being level of the worst off in x is higher than that in y, or the well-being level of the worst off in x is the same as that in y and the well-being level of the second worst off in x is higher than that in y, and so on. That is, we first compare the well-being level of the worst off across distributions. Only when the worst off is at the same level across distributions do we then compare the second worst off. Only when the worst off and the

second worst off are at the same level, do we then compare the third worst off across distributions. This process proceeds up to the best off person. It gives lexicographical priority (for short, lexical priority) to the worse off. It is lexicographical, because the distributions are ranked similar to the way that words are organized in a dictionary: the order of the first letter of each world takes strict priority over the order of its second letter, and so on.

Leximin satisfies strong separability and Pareto. First, consider strong separability. I do not present a proof here. Instead, compare again cases 1 and 2 above. In case 1, Leximin judges that y is better than x. In case 2, it judges y' is better than y. Leximin judges the relative goodness of distributions independently of the well-beings of unaffected people. It surely satisfies strong separability. Next, consider again $x = (100, 100)$ and $y = (200, 100)$. Leximin judges that y is strictly better than x, and hence satisfies Pareto.

What about the Pigou-Dalton condition? Compare again $x = (50, 20, 10)$ and $y = (40, 30, 10)$. Leximin judges that y is better than x. Leximin agrees with the Pigou-Dalton condition that an equalizing transfer makes the outcome better. However, Leximin makes much stronger claim. It claims that *any* transfer of benefit from a better off person to a worse off person makes the outcome better, all things considered. That is, it drops "given the total well-being constant" condition from the Pigou-Dalton condition. To illuminate this point, compare $x' = (50, 20, 1)$ and $y' = (30, 21, 1)$, where the well-being of the second best off is increased at the cost of the well-being of the best off. There is a transfer of benefit from the better off person to the worse off person, but it is a very inefficient one. The Pigou-Dalton condition is silent in this comparison, because the total well-being is decreased by moving from x' to y'. However, Leximin claims that y' is better than x'. Leximin gives priority to the second best off, and the gain in the well-being of the second best off outweighs the loss in the well-being of the best off. That is, Leximin claims that any gain for a worse off person, however small, is more important than any loss for a better off person, however large. Thus, Leximin makes the much stronger claim than the Pigou-Dalton condition.

This stronger claim of Leximin is captured by *Hammond equity* in economics.

> **Hammond equity**: x is better than y if the well-being of a better off person is made lower in y than x and the well-being of

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a worse off person is made higher in y than x without altering the relative position of the two.[19]

The Pigou-Dalton condition claims that, keeping the total well-being constant, the transfer of benefit from a better off person to a worse off person makes the outcome better, all things considered. On the other hand, Hammond equity claims that any transfer of benefit from a better off person to a worse off person makes the outcome better, all things considered. That is, it drops "given the total well-being constant" from the Pigou-Dalton condition. It does not care about the loss in the total well-being of the non-worse off people insofar as the well-being of the worse off is increased.

Compare again $x' = (50, 20, 1)$ and $y' = (30, 21, 1)$. In this comparison, Hammond equity claims that y is better than x. Hammond equity gives lexical priority to the second best off, and the gain in the well-being of the second best off outweighs the loss in the well-being of the best off. That is, Hammond equity claims that any transfer of benefits from a better off person to a worse off person, however small, outweighs any loss in the total well-being of the better off people, however great. Hammond equity rules out the trade off between the gains for the worse off and the losses for the better off people, however many.

This seems to be a drawback for Leximin. However, it can be an advantage. The Pigou-Dalton condition presupposes the notion of the total sum of people's well-being in a distribution, and requires a cardinal measure of well-being. On the other hand, Hammond equity does not require any aggregative notion of people's well-being. This means Hammond equity only requires a common ordinal scale of well-being. Given that Leximin does not require any aggregative notion, it may be appealing for those who believe that interpersonal aggregation of well-being should be ruled out. I will come back to this issue in chapter 7.

Leximin, thus understood, satisfies strong separability and Pareto. Furthermore, it gives priority to the worse off, *albeit* inefficiently. Admittedly, Leximin may be seen as a version of Prioritarianism, if Prioritarians agree to replace the Pigou-Dalton condition by Hammond equity. However, if they think that Hammond equity is too extreme because it rules out a trade off between the gains in the well-being of a worse off person and the loss of a

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[19]Hammond equity is due to Hammond (1976), which provides an axiomatic analysis of Leximin.

better off person, they are not to adopt Hammond equity and hence exclude Leximin from Prioritarianism, or from a plausible form of Prioritarianism. Therefore, if Prioritarians do not want to include Leximin as a version of Prioritarianism, the explanation of this is that Hammond equity rules out a trade off between the gain in the well-being of the worse off and the loss in the well-being of the better off.

It might be argued that Leximin is relational, even though it satisfies strong separability. Prioritarians claim that Prioritarianism is non-relational. They claim that the goodness of a person's well-being is determined independently of other people's well-being. Whenever we give absolute priority to the worst off (the second worst off, the third worst off, and so on), we must know who is the worst off (the second worst off, the third worst off, and so on). This means that we must *compare* the relationship between the different people's well-being in order to find who is the worst off. From this, it would be argued that giving lexical priority entails comparing different people's well-being, and hence that Leximin is relational.[20] I disagree. Suppose that we have one unit of benefit and that we are to give it to someone. Then, compare two sets of distributions:

Case 1: $x = (2, 4, 4)$ $y = (3, 4, 4)$

Case 2: $z = (2, 1, 1)$ $w = (3, 1, 1)$

By moving from x to y, or from z to w, the well-being of person 1 is increased by one unit. The increase in the goodness of this benefit is non-relational; it should be the same in both cases. But in the first case, person 1 is the worst off, whereas in the second case he is better off than the others. According to Prioritarianism, it is better to give this benefit to the person who is at a lower absolute level. Therefore, it is better to give the benefit to person 1 in x, but in z it would be better to give the benefit to either person 2 or 3. So when we are concerned with how we should judge, it is necessary to know how well off a person is relative to other people.

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[20]This question is raised by Rabinowicz (2002, p. 13n). Rabinowicz writes: "it is incorrect to interpret Rawls's difference principle as the extreme, lexical form of the Priority View. Rawls's principle gives absolute priority to those people who are worse off than all others. The priority given to the worse off is not, on that principle, due to the fact that these people are 'worse off than they might have been'. If their welfare level were arbitrarily increased but they would still be worse off than others, improving their lot would still have the same (absolute) priority".

Prioritarians claim that the goodness of the benefit depends only on how well off the recipient of the benefit is. But the weight of this goodness in a choice between distributions clearly depends on how well off others are.

The same is true for Leximin. According to Leximin, the goodness of a benefit to a person is not given by a continuous, strictly concave real-valued function, because it is a discontinuous betterness ordering. Rather, benefiting a worse off person creates discontinuously greater goodness. But again, the weight of this "goodness" depends on how well off the others are.

Three things should be clearly distinguished here: (a) the size of a benefit, (b) the goodness of giving the benefit to someone, and (c) what I call the weight of this goodness in deciding between distributions. The size of the benefit is simply the amount of well-being a person receives by going from one distribution to another. If person 1 gets w_1 in distribution x and he gets w_1' in distribution y, the size of the benefit for him by moving from x to y is $(w_1 - w_1')$.

The goodness of a benefit to a person (or the moral goodness of the benefit) depends solely on how well off he is: it is therefore non-relational. In the example, the goodness is given by $g(w_1) - g(w_1')$. On Leximin, the goodness of a benefit to a person is not given by a continuous, strictly concave real-valued function. Rather, it has discontinuously greater value to benefit a person if he is worse off.

The weight of the goodness depends on how well off the others are. Consider the above example again. The goodness of giving one unit of well-being to person 1 is the same in both x and y: it is $g(3) - g(2)$. But the weight of the goodness is different in the two cases: $g(3) - g(2)$ is greater than $g(5) - g(4)$, so whenever we have one unit of well-being to add in x, we should give this benefit to person 1 rather than to one of the others. On the other hand, given that $g(3) - g(2)$ is smaller than $g(2) - g(1)$, so in the case of z, we should give the benefit to either person 2 or 3.

This distinction helps us to understand in which sense Prioritarianism is non-relational. The size of a benefit and the goodness of the benefit to each person are independent of other people's well-being. However, the weight of the goodness of a benefit depends on how well off the other people are. Therefore, Prioritarianism actually includes some relationality in order to determine the weight of the goodness of a benefit. Prioritarianism is non-relational in the sense that the size of benefit and the goodness of

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benefit to each person are independent of other people's well-being. Leximin satisfies strong separability and Pareto, and hence it is non-relational like other versions of Prioritarianism. So if Prioritarians agree to replace the Pigou-Dalton condition by Hammond equity, it may be seen as a version of Prioritarianism.

2.7   Economists' views

Some economists would claim that there is nothing new in Parfit's proposal of Prioritarianism. They would say that Prioritarianism, defined by strong separability and the Pigou-Dalton condition, have been well known amongst economists for a long time: it can be traced back at least to Atkinson (1970) and maybe to Dalton (1920). Economists would further claim that we actually do not need strong separability to give priority to the worse off: all we need are two significantly weaker conditions: *symmetric* and *strictly S-concave* functions of people's well-beings. In this section, I shall discuss what Parfit's Prioritarianism adds to the literature of egalitarian social welfare function in economics.

It is Hugh Dalton (1920) who first proposed a kind of Prioritarianism. Of course, Dalton did not use the word "Prioritarianism", because such an expression did not exist in his time. However, his proposal is exactly the same as the formal definition of Prioritarianism on page 29. The difference between Dalton's proposal and Parfit's is that Dalton was concerned with economic welfare and income, whereas Parfit is concerned with the goodness of well-being and well-being.[21] Dalton simply assumed that a welfare function, which maps the vector of income onto the social welfare ordering, is "additive", and that "the relation of income to economic welfare is the same for all members of the community".[22] His analysis primarily examined the shape of welfare function an egalitarian society would have. He puts forward what he called "the principle of transfers", and suggested some functions which satisfy the principle of transfers. Dalton argued that a welfare function is additive and strictly concave just like my formal definition. Thus, the *formula* of what we call Prioritarianism these days is widely known in

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[21] Dalton (1920, p. 348) wrote: "the effects of the distribution of income upon the distribution and total amount of economic welfare, which may be derived from income".

[22] Dalton (1920, p. 349).

economics, although economists are concerned with economic welfare and income. It should be noticed that, as Dalton assumed welfare function to be additive, he simply took it for granted additively separable (hence strongly separable and, in turn, non-relational): he did not explain why a welfare function should be additively separable or non-relational. Likewise, Atkinson (1970) assumes that social welfare function is additively separable, but he does not give any support for this view.

Dasgupta, Sen and Starrett (1973) have argued that additive separability is too a strong condition,[23] and showed that the welfare function need not be strictly concave in order to embody the idea of giving priority to the worse off, if additive separability is relaxed to symmetry. If the welfare function is symmetric in its arguments, the welfare function only needs to be *strictly S-concave*.

Let me explain "symmetric" and "strictly S-concave" respectively. A symmetric function implies that the goodness of a distribution remains unchanged even when the personal identities of well-being are permutated. More formally, the symmetric goodness function implies that:

$$g(w_1, w_2, ..., w_n) = g(w_2, w_1, ..., w_n) = ... = g(w_n, w_2, ..., w_1). \qquad (2.2)$$

In plain words, symmetry implies that the permutations of personal identities do not the change the goodness of a distribution. It can be seen as a condition of impartiality. Symmetry may be accepted by any person without much dispute. Any sensible distributive principle (Prioritarianism, Maximin, Leximin, classical utilitarianism and so on) satisfies this condition.

Strict S-concavity is defined as follows. $g(\ )$ is strictly S-concave if for all bistochastic matrices Q, it is the case that $g(Qx) > g(x)$, where Qx is not x nor a permutation of x. A bistochastic matrix is a square matrix, where all of the entries of the matrix are non-negative and each of the rows and columns adds up to one.[24] Suppose that there is a bistochastic matrix Q such that $y = Qx$, where y is not x or a permutation of x. Then, the

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[23]But they do not explain why additive separability is too strong, they simply say "[a]s is well known, additive separability is a strong condition to impose on a general welfare function". Of course, mathematically speaking, strong separability is stronger than, for example, weak separability. But it is not clear if strong separability is ethically too demanding.

[24]For example, the matrix

goodness function is strict S-concavity if $g(y) > g(x)$.[25]

In plain words, if there exists a bistochastic matrix such that $y = Qx$, there exists a vector of well-being such that a vector y can be obtained from x by a series of transfers from the better off to the worse off. Strict S-concavity claims that y, which is obtained from x by a series of transfers from the better off to the worse off, is better than x. This is exactly what the Pigou-Dalton condition claims, and actually it is as far as we can go with the Pigou-Dalton condition. The goodness function is strictly S-concave if, whenever one distribution of well-being can be obtained from another distribution by a series of the equalizing transfers, the goodness of the former is greater than that of the latter.[26]

Economists thus claim the following. If we are concerned only with giving priority to the worse off, i.e. the Pigou-Dalton condition, all we need is strict S-concavity and symmetry. In other words, strict S-concavity and symmetry are jointly sufficient to hold a principle of giving priority to the worse off. This position may be called *PD-ism* after the Pigou-Dalton condition.

> **PD-ism:** $x = (w_1, w_2, ..., w_n)$ is at least as good as $y = (w'_1, w'_2, ..., w'_n)$ if and only if $G(x) = g(w_1, w_2, ..., w_n) \geq G(y) = g(w'_1, w'_2, ..., w'_n)$, where $g(\ )$ is a symmetric and strictly S-concave function.

This PD-ism, however, is too broad. It is so broad because many distributive principles fall under PD-ism, and because many interesting philosophical distinctions are dismissed. Needless to say, Prioritarianism is a version of PD-ism. As I shall show in chapter 5, some versions of Telic Egalitarianism satisfy the Pigou-Dalton condition and give priority to the worse off. Not surprisingly, these versions of Telic Egalitarianism can be represented as a strictly S-concave function. PD-ism implies that Prioritarianism and some versions of Telic Egalitarianism fall under the same class of distributive principle.

$$\begin{bmatrix} 0.5 & 0.2 & 0.3 \\ 0.1 & 0.6 & 0.3 \\ 0.4 & 0.2 & 0.4 \end{bmatrix}$$

is bistochastic.

[25]The proof is found in Dasgupta, Sen and Starrett (1973) and Sen (1973, pp.55-56).

[26]See Dasgupat, Sen and Starrett (1973), and Sen (1973, pp. 54-56).

As Parfit notes, Prioritarianism has a built-in bias towards equality. As the Pigou-Dalton condition claims that, keeping the total well-being constant, a more equal distribution is better than less equal one, equality plays some role in Prioritarianism. As regards practical distributive judgements, Prioritarianism and Telic Egalitarianism may end up making the same judgement. The practical difference between Prioritarianism and some versions of Telic Egalitarianism may be small. But there is a crucial theoretical/philosophical difference between the two principles.

If Prioritarianism is intended to embody only the idea of "gives priority to the worse off", economists could reasonably claim that Prioritarianism is not new: they could claim that economists have provided a sophisticated analysis of Prioritarianism. However, PD-ism, defined by strict S-concavity and symmetry, does not distinguish some versions of Telic Egalitarianism from Prioritarianism. It is too thin a distributive principle to analyze the characteristically different distributive principles. As Dasgupta, Sen and Starrett (1973) have showed, strict S-concave function is as far as we can go with the Pigou-Dalton condition. This is all economists have showed. If they claim that Prioritarianism does not add anything to the strictly concave, symmetric goodness function, they are throwing the baby out with the bath water.

Economists certainly showed how far we can go with the idea of "giving priority to the worse off" in a precise way. However, we still have to discuss why one distributive principle (say, a version of Telic Egalitarianism) is more plausible than another (say, Prioritarianism), even though both distributive principles entail strict S-concavity. After all, it is the claim of strong separability that makes Prioritarianism new in the discussion of distributive judgement. As I said earlier, strict concavity is, mathematically, a stronger condition than strict S-concavity with symmetry. Economists criticize strict concavity without moral argument. The reason why Prioritarianism requires strict concavity rather than strict S-concavity is due to the moral claim that the goodness of each person's well-being should be determined independently of other people's well-being. Strong separability exemplifies the idea of non-relationality: Prioritarians believe that the goodness of each person's well-being should be determined independently of other people's well-being. To materialize this claim, they need strong separability. To materialize the strongly separable goodness function, they require a condition

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that is stronger than strict S-concavity, i.e. strict concavity. This is why I defined Parfit's Prioritarianism by the Pigou-Dalton condition together with strong separability. Prioritarianism is new in the sense that it provides the injection of an ethical argument to justify strong separability. Strong separability is needed by Prioritarianism because Prioritarians support the moral claim that the goodness of a person's well-being is determined independently of other people's well-being. However, many economists have failed to recognize the normative implication of strong separability.

Chapter 3

Priority and Threshold

3.1 Introduction

There may be several objections to Prioritarianism. Although in chapter 5 I raise several objections to Prioritarianism in defence of my version of Telic Egalitarianism, in this chapter I take up one objection in order to show the far-reaching scope of Prioritarianism.

The objection starts with the following question: should we give priority to the worse off even if his well-being is at a very high absolute level? Suppose, for example, that we are faced with a choice between two acts (or policies), one of which will increase the well-being of the best off, the other of which increases the well-being of the second best off. Should we give priority to the second best off over the best off? Needless to say, the second best off is at a lower absolute level. Then, when some benefit becomes available (but for some reason, it is not possible to transfer it to people other than the first and second best off), is it better to give it to the second best off rather than the best off?

It might be argued that the distribution of well-being amongst well off people is not morally relevant in evaluating the overall goodness of a distribution. A plausible distributive principle need not, or should not, be concerned with priority amongst well-off people. An objection of this kind may give a good reason to search for an alternative distributive principle.

There may be several directions such a search might take. One possible direction is this. We set aside, at least for the moment, the idea of giving priority to the worse off. Nonetheless, we adopt a principle that gives priority

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only to those below a certain absolute level of well-being, and that gives no priority to those above that level: that is to say, "giving priority to the badly off". Let us call such a principle the *Threshold Principle.* Call the absolute level of well-being below which our moral concern is warranted the *threshold.* The Threshold Principle claims that we should give priority to the well-being of those people below the threshold over the well-being of those above the threshold, and that we should give the same weight to those people above the threshold.

The main purpose of this chapter is to propose two formulae of the Threshold Principle, and to show the theoretical similarity between Prioritarianism and the Threshold Principle. If a distributive principle is said to be one version of Prioritarianism whenever it can be phrased as "giving priority to ( )", then the Threshold Principle may be seen as a version of Prioritarianism, because it can be phrased as "giving priority to the badly off". However, such a characterization is not helpful in judging whether or not one distributive principle is a version of Prioritarianism. In this chapter, I argue that the Threshold Principle can be seen as a version of Prioritarianism in its theoretical structure, if Prioritarians readily restricts the scope of the Pigou-Dalton condition. I propose two formulae of the Threshold Principle, *Lexical* and *Continuous Threshold Principles.* Then, I show that these two formulae both satisfy strong separability and Pareto fully and the Pigou-Dalton condition only below the threshold: the only difference lies in the scope of the Pigou-Dalton condition. I point out that there is a good reason to give priority to the worse off even above the threshold. If this claim of mine is accepted, then the Threshold Principle satisfies all three core claims of Prioritarianism.

In section 2, I first explain a possible objection to Prioritarianism, namely that we should not care about priority amongst the well off people. I introduce the intuitive argument for the principle that gives priority to those below the threshold over those above it. In section 3, I briefly discuss the literature of needs and John Skorupski's Threshold Justice, which are similar to the Threshold Principle. I point out some problems with these arguments, and offer an informal formula of the Threshold Principle. In section 4, I discuss how we should aggregate the well-being below the threshold. It turns out that the Threshold Principle should give priority to the worse off below the threshold level. In section 5, I propose two formulae of the Threshold

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Principle. The one is the Lexical Threshold Principle, which rules out a trade off between the super-threshold well-being and the sub-threshold well-being. The other is the Continuous Threshold Principle, which does allow such trade offs. In section 6, I clarify the difference and similarity between Prioritarianism and the Threshold Principle. The Threshold Principle, be it Lexical or Continuous, satisfies strong separability and Pareto fully and the Pigou-Dalton condition only below the threshold. In section 7, I discuss Roger Crisp's recent claim that his proposed Compassion Principle, which is equivalent to my Lexical Threshold Principle, is different from, and more plausible than, Prioritarianism.

3.2 A challenge

The Pigou-Dalton condition claims that, keeping the total well-being constant, the transfer of some benefit from a better off person to a worse off person makes the outcome better, all things considered. It maintains that, keeping the total well-being being constant, a more equal distribution is better than a less equal one, and hence that equality increases the overall good of a distribution without increasing the total well-being up to the point where the well-being of a better off person and that of a worse off person are equalized. Thus, even if Prioritarianism does not hold that equality is valuable in itself, it certainly involves some egalitarian element in its theoretical structure. Parfit is aware of this, when he states that Prioritarianism has "a built-in bias towards equality", and that Prioritarianism is "Non-Relational Egalitarian" as opposed to treating equality as valuable in itself. Prioritarianism is "Non-Relational" in the sense that it rules out any relationship between different people's well-beings from consideration.

According to Parfit's Prioritarianism, for any two well-beings, if a person's well-being is at a higher absolute level than another person's well-being, we can increase the overall goodness of a distribution by transferring some benefit from a better off person to a worse off person. This is the case for any pair of a better off person and a worse off person. For example, take the best off and second best off person. By the Pigou-Dalton condition, Prioritarians claim that we should give priority to the second best off rather than the first best off: if we transfer some benefit from the first best off to the second best off, the outcome will be better, even if there is no increase

in the total well-being.

This implication of Prioritarianism may be challenged. Is it plausible to claim that the outcome is made better by transferring some benefit from the best off to the second best off? Should we give priority to the second best off over the first best off? Should we be concerned with priority amongst the well off people? Even if a challenge of this sort does not provide a sufficient reason to reject Prioritarianism, it seems to give a good reason to motivate the search for a different distributive principle, according to which no priority is given amongst those people within the well off group.

There may be several ways to exclude the very well off people from the scope of priority. One possibility is what I call the *Threshold Principle*. By "threshold", I mean some absolute level below which one's well-being warrants special moral concern in evaluating the overall goodness of a distribution. Preliminarily speaking, the Threshold Principle maintains that we give priority to the people below the threshold, and that we assign no priority to the people above the threshold. The Threshold thus works as a cut-off point for deciding whether someone's well-being may or may not warrant our special moral concern.

The Threshold Principle may be appealing for several reasons. The plight of people below the threshold would probably arouse our compassion. If not harsh, we would readily give priority to those below the threshold over the promotion of our own interest. Many of us are drawn to such a concern through our basic compassion. Consequently, it is unlikely that many people would reject the spirit of the Threshold Principle. The Threshold Principle may be required from the point of moral agency. A person may not be thought to be a fully rational and autonomous agent unless a minimum level of well-being is met. It is not radically demanding to claim that maintaining everyone above such a level is a prerequisite for any sensible moral theory. Whatever the reason would be, the Threshold Principle seems to have strong force. However, the main purpose of the present chapter is not to provide a moral foundation to the Threshold Principle, but to examine the theoretical structure of the Threshold Principle in order to clarify the scope of Prioritarianism.

3.3 Similarity arguments

Before I present my own formulae of the Threshold Principle, it may be instructive to look at arguments similar to the Threshold Principle in order to motivate my formulae.

The idea of giving priority to the badly off has been extensively discussed in a specific branch of philosophy, i.e. the literature of needs. The literature includes David Braybrooke (1987, 1998), Harry Frankfurt (1984), and David Wiggins (1998). Their approach to the issue first establishes an absolute conception of needs, and then puts forward a principle that gives *absolute* priority to the fulfilment of needs over the satisfaction of a mere want or the promotion of the individual, or total, well-being. David Wiggins, for example, advocates the *Limitation Principle*, according to which the public body should not intervene in a citizen's affairs in such a way that vital needs are sacrificed to mere desires, or that stronger vital needs are sacrificed to lesser ones. Similarly, Braybrooke advocates the *Principle of Precedence*, according to which satisfying the Minimum Standards of Provision for the List of Matters of Needs takes "a lexicographical priority" over other political concerns.

The proposals of these philosophers are undoubtedly important. However, I shall not start my analysis with their proposals for two reasons. Firstly, needs are just one aspect of well-being, and my analysis here is concerned with well-being in general. To specify the notion of a person's needs is one thing, and to specify the overall well-being of that person is quite another. Some people might claim that all we care about is people's needs, and that we should not care about peoples' well-being in general. However, the present purpose is to propose a distributive principle that gives priority to the well-being below a certain low level over the well-being above that level, and to contrast it with Prioritarianism that is defined on peoples' well-being. Therefore, I shall begin my analysis by considering the distribution of peoples' well-being, not their needs.

Secondly, those proposals are not accommodated in the theory of betterness: they may resist discussing the fulfilment of needs in terms of betterness. For example, for Wiggins, the fulfilment of needs is the prerequisite for any workable moral theory. He would claim that failing to fulfil people's needs is not bad: i.e. that the fulfilment of needs is not a matter of better or worse.

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He might claim that peoples' needs ought to be fulfilled, full stop. However, the present dissertation is concerned with the betterness of distributions of well-being. I admit that there might be some distributive principles that do not fall under the theory of betterness, like Nozick's side-constraint theory. But this lies outside the scope of this dissertation. Those proposals about needs do not fit well into this dissertation. For these reasons, I shall not discuss the literature of needs any further.

Recently, John Skorupski (1999) has suggested a version of the Threshold Principle, which he calls *Threshold Justice*. I think his proposal is a good starting point to motivate my formulae of the Threshold Principle. Skorupski discusses both the prudential case (the principle of threshold-constrained maximization) and the moral case (Threshold Justice); this chapter focuses on the latter. Although Skorupski calls his proposed principle "Threshold Justice", it is not meant to be a general theory of justice but a basis to assess actions, characters, institutions, and so on. It is a theory of betterness of distributions with some constraints.

According to Skorupski, Threshold Justice holds that "one should maximize aggregate utility subject to a threshold below which no individual is allowed to fall".[1] Skorupski believes that "our social ideas of social justice are much closer to the Threshold conception than to Utilitarianism or the Difference Principle [Leximin] and thus more easily rationalized by it than by them", because "[u]nlike leximin, Threshold Justice does not proscribe any improvement, however massive, to someone's position when it is offset by a deterioration, however small, in the well-being of someone less well-off. And unlike the principle of aggregate utility, it does not allow indefinite worsening of a person's position so long as that is offset by compensating gains of well-being to others".[2]

Skorupski explains his Threshold Justice as follows: "we shall assume that general well-being is maximized subject to a threshold, and simply maximized where the threshold cannot be met".[3] He seems to maintain the following two-step formulation.

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[1] Skorupski (1999, p. 90).

[2] Skorupski (1999, p. 91).

[3] Skorupski (1999, p. 92). To be fair to Skorupski, it should be noted that this formulation is a purely provisional one, although he does not suggest the definitive one. Probably, Skorupski would readily revise it. However, I examine his provisional formulation to set the framework for our own formulation.

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First step if there exists an alternative where no well-being is below the threshold, then eliminate the sub-threshold alternatives and choose the alternative where the total well-being is maximized.

Second step if there does not exist an alternative where no one well-being is below the threshold, then choose the alternative where the total well-being is maximized.

Threshold Justice, thus formulated, conflicts with his own claim that Threshold Justice has the relative advantage over classical utilitarianism and Leximin. Suppose that the threshold level is set at 10. Then, compare $a = (9, 20, 20, 20)$ and $b = (10, 10, 10, 10)$. By the first step argument, Skorupski's Threshold Justice judges that we should choose b rather than a. But this seems to be in conflict with his criticism against Leximin. Like Leximin, Threshold Justice justifies any total loss of well-being in order to bring the sub-threshold well-being to just above the threshold: it *does* "proscribe any improvement, however massive, to someone's position when it is offset by a deterioration, however small, in the well-being of someone less well-off".

Skorupski's Threshold Justice is also in conflict with his claim against classical utilitarianism. Assuming again that the threshold is set at 10, compare $c = (5, 10, 10, 10)$ and $d = (1, 15, 15, 15)$. Following the second step argument, we are led to choose d rather than c. Like classical utilitarianism, Skorupski's Threshold Justice actually *does* "allow indefinite worsening of a person's position so long as that is offset by compensating gains of well-being to others".[4]

I think that the natural way to formulate the Threshold Principle is, first, to minimize the badness of the sub-threshold well-being and, then, to assign no special weight to those above the threshold. Let us suggest a plausible form of the Threshold Principle by two sub-principles.

- First, minimize the badness of sub-threshold well-being,

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[4]I should note that the notion of threshold may be vague, or may change in different contexts. For example, in the comparison of $a = (9, 20, 20, 20)$ and $b = (10, 10, 10, 10)$, it may be argued that the notion of threshold does not play any role. The threshold is variable and determined as a parameter only in a concrete problem situation, where the range of distributions is either defined or at least constrained in some way. We may just set the threshold itself, or the level of threshold, by looking at the particular distributions. If this is the case, the level of threshold, or the existence of a threshold itself, may be determined by the context, or by the concrete choice situation.

- Then, maximize the goodness of super-threshold well-being.

I have used the expression "badness of sub-threshold" here. The reason is this. If we just say "minimize the sub-threshold well-being", it will give an impression that we should simply minimize the *total sum* of each person's shortfall from the threshold. But, as I shall argue in the following section, it is not plausible to assume the sum total of the gap between the sub-threshold well-being and the threshold as a target to minimize. We rather need to encompass the amount of sub-threshold well-being in the overall goodness of a distribution. To measure how much the sub-threshold well-being exists in a distribution is one thing. To evaluate the badness of the sub-threshold well-being in the overall goodness of a distribution is quite another. In the next section, I shall first discuss how we should evaluate the badness of sub-threshold well-being.

3.4   The sub-threshold principle

How should we evaluate the badness of sub-threshold well-being? It is straightforward: the less badness of sub-threshold well-being, the better. Then, how do we *measure* the badness of the sub-threshold well-being, which we are to minimize?[5]

One way to measure the badness of the sub-threshold well-being is to measure the *total shortfall* from the threshold. Firstly, we add up the individuals' shortfall from the threshold; then we minimize that total amount. The total shortfall seems to be important information when we measure the badness of sub-threshold well-being. But it alone can not be the measure of the sub-threshold well-being. To illustrate, consider the following example. Assuming that the threshold is set at 10, compare $a = (3, 10, 10, 10, 10)$ and $b = (8, 8, 8, 8, 10)$. The total shortfall judges that the badness of the sub-threshold in a (i.e. 7) is smaller than that in b (i.e. 8). Insofar as the badness of sub-threshold well-being is concerned, a is better than b. However, in a, three people's well-beings are kept above the threshold level at the cost of person 1. The total shortfall does not register the deterioration

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[5]In what follows, I capitalize on Amartya Sen's (1976a) seminal paper, whose far-reaching scope is not fully discussed here. The literature of poverty measurement is rich, and offers many ethical insights. See, for example, Foster (1984) and Foster and Sen (1997).

of the well-being of person 1. This example shows that the total shortfall can justify any loss for the very badly off people for the gain of others below the threshold. The Threshold Principle is originally motivated to assign special concern to the badly off people in absolute terms. Therefore, it is not plausible to formulate it in such a way that someone at a very low absolute level might be made even worse off. A plausible measure should be sensitive to the state of the very badly off.

Another way to measure the badness of the sub-threshold well-being would be to count the number of people below the threshold, which is usually called the *head-count*. That is, we first count the number of people below the threshold in each distribution, and then choose the distribution where the number of people below the threshold is minimized. However, the head-count has the same problem as the total shortfall. Just like the total shortfall, it is not sensitive to the state of the very badly off people. To illustrate the problem, compare $c = (2, 10, 10, 10)$ and $d = (9, 9, 9, 9)$. The head-count judges that the badness of sub-threshold in c is smaller than that in d. This example suggests that the head-count does not take account of the total shortfall of the sub-threshold well-being, and, more importantly, it justifies any loss to the very badly off people in order to bring other people from just below the threshold to just above the threshold. The head-count is not sensitive to the state of the worst off or the badly off.

Both of the measures considered are therefore limited in scope. The total shortfall is insensitive to the state of the very badly off. On the other hand, the head-count has two problems: (a) it does not capture the total shortfall of the sub-threshold well-being, and (b) it is insensitive to the state of the very badly off. It might be easier to reduce the sub-threshold well-being by taking some benefit from a person far below the threshold and giving it to the least badly off person just below the threshold. This, however, seems to be unacceptable, because we may be concerned more with the people far below the threshold than the people just below the threshold.

From these observations, there is a strong reason to suggest that we should give priority to those far below the threshold over those just below the threshold. If we transfer some benefit from the worst off person to another person just below the threshold, then neither the total shortfall nor the head-count would record any change in the badness of sub-threshold well-being, even if the worst off would have been made even worse off. If

this is unacceptable, we should assign more moral weight to the well-being of a worse off person over that of a less badly off person below the threshold. Thus, a plausible measure of the badness of sub-threshold well-being requires us to give priority to the worse off, i.e. to include the Pigou-Dalton condition.

Now, let us define the distributive principle below the threshold well-being precisely. Let $b = \{i|w_i < t\}$ be set of people below the threshold. Then, the sub-threshold principle is defined as follows:

> **Sub-threshold principle**: $G_b = \sum_{i \in b} f(w_i)$, where $f(\ )$ is some strictly concave function.

We started our exploration of the Threshold Principle with the objection that Prioritarians claim that giving priority to the worse off is counter-intuitive. But in formulating the Threshold Principle, we are led to give priority to the worse off within the sub-threshold domain, and to require that the Threshold Principle includes the Pigou-Dalton condition within the sub-threshold domain.

3.5 Two formulae of the Threshold Principle

Having characterized the sub-threshold principle, I turn to the super-threshold principle and its relation to the sub-threshold principle. My provisional idea concerning the Threshold Principle was that we should give priority to those below the threshold over those above the threshold, and give the same weight to all those above the threshold. The super-threshold principle should give the same weight to all those above the threshold when only those above the threshold are affected: within the super-threshold domain, the goodness derived from the same benefit should be the same for everyone, regardless of their absolute level of well-being. So if some benefit is made available, giving it to the better off is equally good as giving it to the worse off, so long as they are above the threshold. This leads us to formulate the super-threshold principle so that the goodness of a person's well-being is an increasing, linear function of his well-being. Let $a = \{i|w_i \geq t\}$ ($a \cup b = N, a \cap b = \emptyset$) be the set of people above the threshold. Then, the goodness of super-threshold, G_a, is defined as follows:

> **Super-threshold principle**: $G_a = \sum_{i \in a} w_i$.

Like classical utilitarianism, well-being of people above the threshold is assigned an equal weight. In the case where there is nobody below the threshold, the Threshold Principle is equivalent to classical utilitarianism. Without much argument, this may be accepted from our original motivation of analysis.

However, upon relating it to the sub-threshold principle, a careful examination is required. I think there are three possible ways to relate the two sub-principles

(a) *absolute priority* of the sub-threshold principle over the super-threshold principle

(b) *lexical priority* of the sub-threshold principle over the super-threshold principle

(c) *continuity* of the sub-threshold and super-threshold principle

On (a) and (b), the two sub-principles are discontinuous in the sense that the sub-threshold principle dominates the super-threshold principle. That is to say, (a) and (b) rule out a trade off between the badness of sub-threshold well-being and the goodness of super-threshold well-being. I call this strong notion of threshold the *hard threshold*. On the other hand, on (c), the two sub-principles are continuous in the sense that it allows a trade-off. That is to say, (c) allows the trade off between the sub-threshold well-being and the super-threshold well-being. I call this weak notion of threshold the *soft threshold*.

Let me explain each possibility. According to (a), the sub-threshold principle dominates the super-threshold principle *absolutely*. That is, the super-threshold principle does not come into play at all unless the sub-threshold well-being is completely eliminated. As long as the sub-threshold well-being exists, the goodness of distributions is judged entirely by the sub-threshold principle, however great the well-being above the threshold is. (a) claims not only that a small gain for those below the threshold outweighs the greater gain of those above the threshold, but also that the state of those above the threshold is not allowed to be a tie-breaker even if the sub-threshold well-being is the same across distributions. To illustrate, compare $x = (9, 10, 10, 10)$ and $y = (9, 20, 20, 20)$. According to (a), x and y are equally good. That is, it claims that the super- and sub-threshold principles

are discontinuous. It ignores the super-threshold well-being as far as there exists the sub-threshold well-being. That is, the sub-threshold principle absolutely dominates the super-threshold principle.

If (a) is seen to be too extreme, we may adopt (b), which is slightly less extreme. (b) claims that the sub-threshold principle *lexically* dominates the super-threshold principle. That is, we first compare the distributions according to the sub-threshold principle, and only when the distributions are equally good, we compare the distributions according to the super-threshold principle. The super-threshold principle kicks in only when the distributions are equally good in terms of the sub-threshold principle. Thus, the super-threshold principle works as a tie-breaker when the badness of sub-threshold well-being is the same across distributions. The chief difference between (a) and (b) is that (b) allows the super-threshold principle to be a tie-breaker when the overall badness of sub-threshold well-being is the same across distributions, whereas (a) does not allow such a possibility as long as there is someone below the threshold. To see this, consider again $x = (9, 10, 10, 10)$ and $y = (9, 20, 20, 20)$. (b) first compares the badness of sub-threshold well-being and judges that x and y are equally good. Then, (b) claims we compare x and y by the super-threshold principle: consequently, it judges that y is better than x. In this sense, (b) is less extreme and possibly more acceptable than (a), even if both (a) and (b) still give a strict priority to the sub-threshold principle over the super-threshold. Now I can state the first formula of the Threshold Principle, *Lexical Threshold Principle*:

> **Lexical Threshold Principle**: $x = (w_1, w_2, ..., w_n)$ is better than $y = (w'_1, w'_2, ..., w'_n)$ if and only if either
>
> - $\sum_{i \in b} f(w_i) < \sum_{i \in b} f(w'_i)$, or
> - $\sum_{i \in b} f(w_i) = \sum_{i \in b} f(w'_i)$ and $\sum_{i \in a} w_i > \sum_{i \in a} w'_i$, where $f(\ )$ is a strictly concave function.

According to the Lexical Threshold Principle, the relative goodness of distributions is determined, first, by the badness of sub-threshold well-being, which is measured in such a way that the well-being at a lower absolute level counts more than the well-being at a higher level within the sub-threshold domain. If the badness of threshold well-being is the same across distributions (or if nobody is below the threshold), then the relative goodness of

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distributions is determined by the total well-being above the threshold. So strict priority is given to the badness of sub-threshold well-being.

It may be argued that the Lexical Threshold Principle is still extreme, because the sub-threshold principle lexically dominates the super-threshold principle. In other words, it is too extreme because the two sub-principles are discontinuous, and because a trade off between the badness of sub-threshold well-being and the goodness of super-threshold well-being is ruled out. As far as one distribution is better than another in terms of the badness of the sub-threshold distribution, discontinuity requires us to ignore the goodness of well-being above the threshold, however great the total of well-being above the threshold would be: any tiny improvement in sub-threshold well-being will justify any total loss of well-being above the threshold. To illustrate, compare $x = (9, 10, 10, 10)$ and $y = (8, 20, 20, 20)$. The Lexical Threshold Principle judges that x is better than y. Discontinuity between the sub- and super-threshold principles thus has an extreme implication, especially for those above the threshold. To support either (a) or (b), we may need a strong argument to justify the claim that a very small gain of the sub-threshold well-being can outweigh any gain for those above the threshold.

One way to avoid the extreme implication of discontinuity is to adopt (c) in order to allow the possibility that a tiny loss for the sub-threshold well-being is outweighed by the sufficiently large gains of those above the threshold. That is, the two sub-principles should be continuous in order to allow the trade off between the badness of sub-threshold well-being and the goodness of super-threshold well-being. Adopting continuity requires us to abandon a strict priority of the sub-threshold principle over the super-threshold principle. But it can still give a special weight to the sub-threshold well-being. It is the *soft threshold* that allows the continuity of the two sub-principles. It is a soft concept of threshold because the cutting power of the threshold is less sharp in the sense that it does not give complete priority to the sub-threshold principle over super-threshold principle. Now I can state the second formula of Threshold Principle, *Continuous Threshold Principle*.

> **Continuous Threshold Principle:** $x = (w_1, w_2, ..., w_n)$ is at least as good as $y = (w'_1, w'_2, ..., w'_n)$ if and only if $\sum_{i \in N}(w_i) \geq \sum_{i \in N}(w'_i)$, where $f(\ )$ is some concave function, which is strictly concave up to T and linear above T.

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Place figure 2 here. (The figure is appended to the end of this dissertation).

According to the Continuous Threshold Principle thus formulated, the goodness of well-being diminishes below the threshold but is a linear function of well-being above the threshold. Figure 2 shows this. Figure also shows that giving some benefit to a worse off person below the threshold always yields more good than giving the same benefit to a better off person. But this is not the case when the worse off person is above the threshold. The Continuous Threshold Principle gives more moral weight to the worse off only within the sub-threshold domain and gives the same moral weight to those above the threshold.

It should be emphasized that the difference between the Lexical and Continuous Threshold Principles depends on whether or not we allow a trade off between the badness of sub-threshold well-being and the goodness of super-threshold well-being. If the minimization of the badness of sub-threshold well-being is thought to take a strict priority over the maximization of the goodness of super-threshold well-being, the Lexical Threshold Principle will be adopted. On the other hand, if a small decrease in the badness of sub-threshold well-being is thought to be compensated for by the sufficiently large increase in the goodness of super-threshold well-being, the Continuous Threshold Principle will be adopted. The choice should depend on how much priority is believed to be given to the sub-threshold well-being.[6]

3.6   Prioritarianism and the Threshold Principle

I have provided two formulae that characterize the Threshold Principle. How the priority to the badly off would be specified depends on the choice of the concept of threshold, i.e. the hard or soft threshold. If we choose the hard concept of threshold, the trade off between the badness of sub-threshold well-being and the goodness of super-threshold well-being is ruled

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[6]However, I should not overemphasize that the choice of formula depends on the notion of threshold. As footnote 5 of this chapter remarks, the notion of threshold may be vague, or may change in different contexts. In some contexts, the notion of threshold does not come into play at all, even if the Threshold Principle is generally endorsed. The level of threshold may be different from one choice situation to another. Also the choice between the hard and soft notions of threshold may depend on the particular situation.

out: we should adopt the Lexical Threshold Principle. On the other hand, if we choose the soft concept of threshold, we should adopt the Continuous Threshold Principle so as to allow the trade off between the badness of sub-threshold well-being and the goodness of super-threshold well-being.

The question I should now ask is whether the Threshold Principle is consistent with Prioritarianism and whether there is a substantial difference between the Threshold Principle and Prioritarianism in their theoretical structure. Recollect that, in chapter 2, I argued Maximin is not a version of Prioritarianism, even though it is phrased as "giving absolute priority to the worst off". It may be argued that the Threshold Principle is a version of Prioritarianism, because it is phrased as "giving priority to the badly off". However, it may not be the case if it does not satisfy the essential claims of Prioritarianism. I have characterized Prioritarianism by strong separability, Pareto, and the Pigou-Dalton condition I should examine whether the Threshold Principle is a version of Prioritarianism, or a completely different distributive principle.

Let us start with strong separability. It is straightforward that the Continuous Threshold Principle satisfies strong separability, since it is formulated as additively separable, and additive separability entails strong separability (see my argument in chapter 2). On the other hand, it is not clear in the case of the Lexical Threshold Principle. But it is also strongly separable. Lexical combination of strongly separable orderings is also strongly separable ordering. The proof is given in the appendix to this chapter. Both Lexical and Continuous Threshold Principles are strongly separable: the goodness of a person's well-being is determined independently of other people's well-being and hence the Threshold Principle is non-relational.

Next, both the Lexical and Continuous Threshold Principles satisfy Pareto, and it is easy to verify this. As for the Lexical Threshold Principle, if we increase one unit of well-being someone either below or above the threshold, this makes the distribution strictly better. The same is true for the Continuous Threshold Principle.

Finally, what about the Pigou-Dalton condition, it is clear that both formulae of the Threshold Principle satisfy the Pigou-Dalton condition only below the threshold level. The only difference is that Prioritarianism satisfies the Pigou-Dalton condition fully and the Threshold Principle satisfies it partially. This difference is obvious enough.

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The two forms of Threshold Principle satisfy strong separability and Pareto, but the Pigou-Dalton condition partially. Like Prioritarianism, these principles are non-relational, and considers the increase in some person's well-being in terms of the all-things-considered judgement. However, these give priority to the worse off only below the threshold level. The difference is the scope of the Pigou-Dalton condition. The issue now is whether the difference in the scope of the Pigou-Dalton condition is substantial enough to separate the Threshold Principle from Prioritarianism. If it is not substantial enough, we may call the Threshold Principle, be it Lexical or Continuous, a "*Threshold Prioritarianism*" in the sense that it gives priority to the worse off only in the sub-threshold domain. I shall now discuss whether there is a substantial difference between the two principles.

The difference, however, may be almost nothing if we consider whether we should really give no priority to those people above the threshold. It may be argued that we should also give priority to the worse off people even if they are above the threshold. Suppose that we can transfer some benefits from some person above the threshold to another person below the threshold. If we give the same moral weight to every person above the threshold, it is the case that we are indifferent between taking the benefits from some person just above the threshold and taking the same benefits from another person far above the threshold insofar as he/she does not cross the threshold level and fall below the threshold. But this is counterintuitive. To illustrate the point, suppose that the present distribution is $(5, 15, 100)$ and that the threshold is set at 10. Then, compare two possible distributions, $x = (9, 11, 100)$ and $y = (9, 15, 96)$. Moving to x, we take the benefits of 4 units from the person just above the threshold. On the other hand, moving to y, we take the same size of benefits from the person far above the threshold. The Lexical Threshold Principle holds that x and y are indifferent, because the total sum of well-being above the threshold is the same. However, it is argued that y is better than x. It may be claimed that we should take the benefits from someone far above the threshold rather than someone just above the threshold. In other words, we should give priority to the worse off above the threshold as well as below the threshold. This, in turn, suggests that the goodness of a person's well-being above the threshold should be some strictly concave function of the absolute level of his well-being. However, it must be the case that the curve above the threshold

is less steep than that below the threshold: this implies that the transfer of some benefit from any person above the threshold to any person below the threshold makes the distribution strictly better.

This thought makes the Threshold Principle closer to Prioritarianism. I discussed that the only structural difference is the scope of the Pigou-Dalton condition. Now, I suggested that we should give priority to the worse off even above the threshold. If my suggestion is accepted, there is no difference between the two principles.

3.7   Crisp's Compassion Principle

In a recent paper, Roger Crisp (2002) rejects Parfit's Prioritarianism, claiming that his proposed *Compassion Principle* is different from, and more plausible than, Prioritarianism. As Crisp rightly presents it, Prioritarianism claims that benefiting the worse off people matters more. But he thinks that this is not plausible. In order to show the intuitively implausible implication of Prioritarianism, he considers the "Beverley Hills case", where we are to offer a fine wine to either two very well off groups, the Super-Rich and Rich. According to Crisp, any version of Prioritarianism claims that we should offer it to the Rich rather than the Super-Rich. Crisp, however, believes this implausible. He thinks that "when people reach a certain level, even if they are worse off than others, benefiting them does *not*, in itself, matter more".[7]

Crisp proposes what he calls the "Compassion Principle" as an alternative distributive principle. He considers the threshold level of well-being, below which the truly virtuous impartial spectator warrants his compassion and assigns priority. The Compassion Principle is stated as follows.

> **Compassion Principle**: Absolute priority is to be given to benefits to those below the threshold at which compassion enters. Below the threshold, benefitting people matters more the worse off those people are, the more of those people there are, and the greater the size of the benefit in question. Above the threshold, or in cases concerning only trivial benefits below the threshold,

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[7]Crisp (2002, p. 13). Original emphasis. In what follows, page references are to his manuscript forthcoming in *Ethics*.

no priority is to be given.[8]

The Compassion Principle, thus defined, gives (1) absolute priority to those below the threshold over those above, (2) relative priority to the worse off amongst those below the threshold, and (3) no priority amongst those above the threshold. Crisp's Compassion Principle makes the same claim as the Threshold Principle I have proposed. Furthermore, Crisp seems to maintain what I called the Lexical Threshold Principle. This is because Crisp seems to rule out a trade off between sub-threshold well-being and super-threshold well-being if the benefit in question is non-trivial. Crisp considers the following example, where the threshold is 25.

	WP	Group 1
Status Quo	22	26
Below	24	26
Above	22	100

In this example, Crisp observes,

> the view [Compassion Principle] will prefer the smallest non-trivial benefit to any number of individuals below the threshold to any benefit, no matter how large, to any number of individuals above the threshold. That is, it will view Below as superior to Above. This implication of the view, however, may not be as implausible as it seems, once we give proper recognition to the fact that the threshold is the point at which compassion no longer applies. There really is something special to be said for benefiting the worst off individual which cannot be said for benefiting those above the threshold.[9]

Crisp wants to rule out the trade off between the well-being above the threshold and the well-being below the threshold. Thus, Crisp believes the threshold to be what I have called the hard threshold. But he might not claim that the well-being of those above is irrelevant at all. Consider the Beverley Hills case again. If we cannot give a fine wine to someone below

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[8] Crisp (2002, p. 16).
[9] Crisp (2002, pp. 16-17).

the threshold for some reason, we should give that wine to at least someone. We should give it to either the Rich or Super-Rich. By giving no priority to any person above the threshold, Crisp does not mean that giving a wine to no person (i.e. throwing it away) is equally as good as giving it to either the Rich or Super-Rich. He means that giving it to the Rich is equally as good as giving it to the Super-Rich. If my interpretation is correct, Crisp is claiming that the goodness of a person's well-being above the threshold is an increasing, linear function of his well-being. Then, it follows that Crisp's Compassion Principle is equivalent to my Lexical Threshold Principle.

Certainly, if a distributive principle claims that some benefits should be given to the Rich rather than to the Super-Rich in Beverley Hills, some people would think it to be implausible. It may be claimed that priority amongst the very well-off people such as the Rich and Super-Rich is not morally relevant in evaluating the goodness of a distribution. Crisp's case for the Compassion Principle may be different from, and more plausible than, Prioritarianism *if* every version of Prioritarianism gives priority to the worse off above the threshold as well as below the threshold. However, it is not clear whether *every* version of Prioritarianism does give priority to the worse off above the threshold. Why must Prioritarians give priority to the worse off above the threshold? Parfit's Prioritarianism suggests that "benefiting people matters more the worse off those people are".[10] He does not rule out the case where no priority is given to the worse off above the threshold. Parfit may accept Crisp's Compassion Principle or my Lexical Threshold Principle as a version of his Prioritarianism. It is natural to think that there are several versions of Prioritarianism. Parfit's Prioritarianism, which Crisp criticizes, is just one version of Prioritarianism. It may be the case that his Compassion Principle is more plausible than the version of Prioritarianism Crisp has in mind. But this does not mean that his Compassion Principle is more plausible than all versions of Prioritarianism. This point is obscured in Crisp's discussion because he does not define Prioritarianism in a clear way. He criticizes a typical version of Prioritarianism. He might be right, but, if there are other versions of Prioritarianism, it is not obvious that Crisp has successfully rejected Prioritarianism *tout court*.

In chapter 2, keeping closely to Parfit, I defined Prioritarianism by strong separability, Pareto and the Pigou-Dalton condition. I think that

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[10]Parfit (1995, p. 19).

every version of Prioritarianism is required to satisfy strong separability and Pareto fully. The main idea behind Prioritarianism is that the goodness of well-being should be determined independently of other people's well-being. Strong separability best captures non-relationality. So, for any well-being, be it above or below the threshold, the goodness of well-being must be determined non-relationally. At the same time, Prioritarianism is motivated by the Levelling Down Objection. This suggests that Prioritarianism should satisfy Pareto: otherwise, it is subject to the Levelling Down Objection. In order for a distributive principle to be a version of Prioritarianism, strong separability and Pareto must be satisfied fully.

On the other hand, it is not clear if every version of Prioritarianism is required to satisfy the Pigou-Dalton fully. See figure 2 in this chapter again. The Threshold Principle gives priority to the worse off below the threshold. It also claims that a transfer of some benefit from someone above the threshold to another person below the threshold makes the outcome better, even though it does not claim that a transfer of benefit from someone above the threshold to another person above the threshold makes the outcome better. It is not necessarily the case that any version of Prioritarianism satisfies the Pigou-Dalton condition fully. If a distributive principle satisfies the Pigou-Dalton condition below the threshold and if it satisfies strong separability fully, it can be seen as a version of Prioritarianism. My proposed Threshold Principle, be it Lexical or Continuous, satisfies these requirements. It satisfies strong separability and Pareto fully and the Pigou-Dalton condition below the threshold. This is why I think that the Threshold Principle is a partial Prioritarianism. The Prioritarianism Crisp has in mind is what might be called *complete Prioritarianism* vis-à-vis Threshold Prioritarianism, since it is supposed to satisfy strong separability, Pareto and the Pigou-Dalton condition fully. But I doubt that any Prioritarian is required to support complete Prioritarianism. Moreover, I pointed out a case for giving priority to the worse off above the threshold: in order to benefit a person below the threshold, it may be more desirable to take some benefit from someone far above the threshold rather than another just above the threshold. If this claim is accepted, there is no structural difference between the Threshold Principle and Prioritarianism.

I think that there are different possible versions of Prioritarianism. Some would claim that absolute priority should be given to the worse off, whereas

others would claim that only relative priority should be given. Given these diverse versions of Prioritarianism, one version may be more plausible than another, and there are various reasons to support one particular version. I agree with Crisp that his Compassion Principle is more plausible than *the* version of Prioritarianism he criticizes (i.e. complete Prioritarianism). But, as I have suggested, it is possible that some versions of Prioritarianism give no priority is given to the well off people. The form of Prioritarianism that Crisp criticizes is just one version of it. So is his Compassion Principle. Therefore, Crisp's discussion should be seen as an attempt to offer a moral argument that one version of Prioritarianism is more plausible than another, but not as an attempt to reject Prioritarianism in general. Crisp's paper does not successfully reject the general idea of Prioritarianism. Quite the contrary, it shows the far-reaching scope of Prioritarianism.

Appendix: Lexical Threshold Principle and strong separability

I shall prove that the Lexical Threshold Principle is strongly separable.

Let a be set of people above the threshold, i.e. $a = \{i | w_i \geq t\}$, and b be set of people below the threshold, i.e. $b = \{i | w_i < t\}$.

Let $\succeq$ be the betterness ordering of the Lexical Threshold Principle, which is reflexive, transitive, and complete. Write $\succ$ the asymmetrical part and $\sim$ the symmetrical part.

Let us compare $(w_1, w_2, ..., w_k, \bar{w}_{k+1}, ..., \bar{w}_n)$ and $(w'_1, w'_2, ..., w'_k, \bar{w}_{k+1}, ..., \bar{w}_n)$, where $\bar{w}_i$ is some fixed well-being level . Let m be $m = \{i | i = 1, 2, ..., k\}$, and l be $l = \{i | i = k+1, ..., n\}$. Let w_m be set of well-being of m, and $\bar{w}_l$ be set of well-being of l. From the formula of the Lexical Threshold Principle, $(w_m, \bar{w}_l)$ is better than $(w'_m, \bar{w}_l)$ if and only either (a) $\sum_{i \in b} f(t - w_i) < \sum_{i \in b} f(t - w'_i)$, or (b) $\sum_{i \in b} f(t - w_i) = \sum_{i \in b} f(t - w'_i)$ and $\sum_{i \in a} w_i > \sum_{i \in a} w'_i$. I need to show that $(w_m, \bar{w}_l)$ is better than $(w'_m, \bar{w}_l)$, regardless the level of well-being of l. That is, $(w_m, \bar{w}_l) \succeq (w'_m, \bar{w}_l)$ if and only if $(w_m, \tilde{w}_l) \succeq (w'_m, \tilde{w}_l)$, where $\tilde{w}_l$ is set of well-being of different level.

Proof

I shall first prove that if $(w_m, \bar{w}_l) \succeq (w'_m, \bar{w}_l)$, then $(w_m, \tilde{w}_l) \succeq (w'_m, \tilde{w}_l)$.

Since $(w_m, \bar{w}_l) \succeq (w'_m, \bar{w}_l)$, $\sum_{i \in b} f(w_m, \bar{w}_l) \leq \sum_{i \in b} f(w'_m, \bar{w}_l)$. As the sub-threshold principle is additively separable, $\sum_{i \in b} f(w_m, \tilde{w}_l) \leq \sum_{i \in b} f(w'_m, \tilde{w}_l)$. So either $\sum_{i \in b} f(w_m, \tilde{w}_l) < \sum_{i \in b} f(w'_m, \tilde{w}_l)$ or $\sum_{i \in b} f(w_m, \tilde{w}_l) = \sum_{i \in b} f(w'_m, \tilde{w}_l)$.

If $\sum_{i \in b} f(w_m, \tilde{w}_l) < \sum_{i \in b} f(w'_m, \tilde{w}_l)$, then $(w_m, \tilde{w}_l) \succ (w'_m, \tilde{w}_l)$, as required.

If $\sum_{i \in b} f(w_m, \tilde{w}_l) = \sum_{i \in b} f(w'_m, \tilde{w}_l)$, then $\sum_{i \in b} f(w_m, \bar{w}_l) = \sum_{i \in b} f(w'_m, \bar{w}_l)$. But then, by the definition of the Lexical Threshold Principle, since $(w_m, \bar{w}_l) \succeq (w'_m, \bar{w}_l)$, $\sum_{i \in a}(w_m, \bar{w}_l) \geq \sum_{i \in a}(w'_m, \bar{w}_l)$. Therefore, $\sum_{i \in a}(w_m, \tilde{w}_l) \geq \sum_{i \in a}(w'_m, \tilde{w}_l)$. Since $\sum_{i \in b} f(w_m, \tilde{w}_l) = \sum_{i \in b} f(w'_m, \tilde{w}_l)$, by the definition of the Lexical Threshold Principle, $(w_m, \tilde{w}_l) \succeq (w'_m, \tilde{w}_l)$, as required.

The "only if" part follows from the same argument. Therefore, $(w_m, \bar{w}_l) \succeq (w'_m, \bar{w}_l)$ if and only if $(w_m, \tilde{w}_l) \succeq (w'_m, \tilde{w}_l)$.

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Chapter 4

On Levelling Down

4.1 Introduction

This chapter begins my defence of some versions of Telic Egalitarianism.
However, I shall not attempt to directly criticize Parfit's Prioritarianism
or support any version of Telic Egalitarianism. The present purpose is to
show that the version of Telic Egalitarianism I defend, *Weighted Egalitari-
anism*, is not susceptible to the Levelling Down Objection. If my claim is
right, the Levelling Down Objection does not show the relative advantage
of Prioritarianism over Weighted Egalitarianism.

The discussion of levelling down, however, yields a positive messages for
Telic Egalitarianism. That is, whenever equality is thought to be valuable,
Weighted Egalitarianism should be adopted. In section 2, I show that some
versions of Telic Egalitarianism is not subject to the Levelling Down Ob-
jection. In section 3, I distinguish two versions of Telic Egalitarianism, i.e.
Communal Egalitarianism and Weighted Egalitarianism, the latter of which
avoids the Levelling Down Objection. In section 4, I clarify what form of
Telic Egalitarianism avoids the Levelling Down Objection, and what version
of Telic Egalitarianism Parfit successfully criticizes in the Levelling Down
Objection. In section 5, I discuss John Broome's Individualistic Egalitari-
anism, which also avoids the Levelling Down Objection though in a rather
strange way. In section 6, I examine how Communal Egalitarianism can
avoid the Levelling Down Objection.

4.2 Is the Levelling Down Objection successful?

Levelling down means that the well-being of a better off person is lowered to the level of a worse off person without benefiting any person. Parfit points out that if equality is valuable in itself, levelling down is, at least in one respect, better. However, he believes it is not better in any respect, and that this implication of Telic Egalitarianism is absurd. This is Parfit's Levelling Down Objection to Telic Egalitarianism.

Let us clarify more precisely what the Levelling Down Objection implies. Telic Egalitarians believe in the Principle of Equality and Principle of Utility. According to the Telic Egalitarianism Parfit objects to, the goodness of a distribution is determined by the badness of inequality and the goodness of well-being. This is formally expressed as follows.

$$G = g(W, I)$$

where W is the aggregated well-being across people, I is some inequality measure, and $g(\ )$ is a function that is increasing in W and decreasing in I.

The overall good of a distribution is determined by the aggregated well-being, W, and some inequality measure, I. Given the aggregated well-being and some measure of inequality, the function $g(\ )$ fixes the relationship between W and I in the overall good of the distribution. For example, if the overall good of a distribution is represented by an additive form, it follows that $G = W - \alpha I$, where α is some positive number. I think this is the Telic Egalitarianism Parfit has in mind.

What the Levelling Down Objection implies is that, if the well-being of a better off person is reduced to the level of a worse off person without benefiting any person, it is better in terms of I, even though it is worse in terms of W. It does not consider whether or not Telic Egalitarianism maintains that the overall goodness of a distribution, G, is increased. The Levelling Down Objection is not concerned with an all-things-considered judgement concerning the goodness of a distribution. It does not object to Telic Egalitarianism that x is, all things considered, better than y. It objects only that x is, *at least in one respect*, better than y. The Levelling Down Objection highlights this particular feature of Telic Egalitarianism, not the overall goodness of a distribution.

To see the reach of the Levelling Down Objection, let us consider some simple examples. Suppose that there are two people, and that inequality

is measured by the absolute difference between two well-beings. Then, the overall goodness of a distribution is given by

$$G = (w_1 + w_2) - 1/2|w_1 - w_2|. \tag{4.1}$$

The badness of inequality is normalized by the number of people, i.e. 1/2 here.

In equation (4.1), the distributive judgement *seems* to be subject to the Levelling Down Objection. Suppose that person 1 is better off than person 2, namely that $w_1 > w_2$. When w_1 is levelled down to w_2, the value of $1/2(w_1 - w_2)$ is reduced to nil, and hence the bad of inequality is reduced. This means that the levelling down of w_1 is better in terms of equality. Telic Egalitarianism, represented in equation (4.1), seems to claim that levelling down is better in one respect: it seems to encounter the Levelling Down Objection. But actually it does not.

However, there is another way to look at equation (4.1).[1] By a simple rearrangement, equation (4.1) is written as follows:

$$G = \begin{cases} 1/2w_1 + 3/2w_2 & \text{if } w_1 \geq w_2 \\ 3/2w_1 + 1/2w_2 & \text{if } w_1 < w_2. \end{cases} \tag{4.2}$$

Equation (4.1) is mathematically equivalent to equation (4.2). Equation (4.2) implies (a) that if w_1 is greater than w_2 the weight given to w_1 is smaller than w_2, and (b) that if w_2 is greater than w_1 the weight given to w_2 is smaller than the weight given to w_1. That is to say, the well-being of the worse off counts more, and the well-being of the better off counts less. That is, equation (4.2) gives priority to the worse off.

Equations (4.1) and (4.2) are equivalent. However, according to equation (4.2), the levelling down of the better off is *not* better in *any* respect. Suppose again that $w_1 > w_2$. According to equation (4.2), the levelling down of w_1 is not better for person 1. It is not better for person 2, either. It is just worse for person 1. So the levelling down of w_1 is not better in any respect. Thus, Telic Egalitarianism represented as (4.2) is not subject to the Levelling Down Objection. Although equations (4.1) and (4.2) are equivalent, levelling down is better in one respect according to equation (4.1), whereas

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[1] I owe the following point to John Broome. See also Blackorby and Donaldson (1980, p. 115).

it is not better in any respect according to equation (4.2).[2]

A tentative conclusion may be drawn from this, namely that Telic Egalitarianism is not subject to the LDO, whenever it is formulated as equation (4.2). What goes on in the rearrangement from (4.1) to (4.2) is this: the badness of inequality is reduced to the weight of each person's well-being. In equation (4.2), the fact that person 1 is better off than person 2 decreases the weight, or importance, of person 1's well-being in the overall goodness of a distribution, and the fact that person 2 is worse off than person 1 increases the weight, or importance, of person 2's well-being in the overall goodness of a distribution. That is, the badness of inequality is reduced to the weight, or importance, of each person's well-being. One's being better off (in the relative sense) decreases the importance of his well-being, and one's being worse off increases the importance of his well-being. And the reduction removes "one respect" with regard to which levelling down is better. Therefore, if the badness of inequality is attributed to the weight of each person's well-being, Telic Egalitarianism cancels "one respect", which the LDO focuses on. I then conclude that Telic Egalitarianism is not subject to the LDO, whenever it is formulated in such a way that the badness of inequality is reduced to the weight of each person's well-being. The LDO is not a successful objection, if Telic Egalitarianism is understood in this way.

4.3   Just a mathematical trick?

Someone may be sceptical about my argument above, since it seems to be based on a kind of technical manoeuvre. It might be argued:

(a) that Telic Egalitarianism as in equation (4.1) is subject to

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[2]My example can be generalized to cases where there are more than three people. Take the three-person case. The simple Telic Egalitarian formula is given by,

$$G = w_1 + w_2 + w_3 - 1/3 \sum_i \sum_j \max\{0, w_i - w_j\}.$$

In order to rewrite this formula, we need to consider six possible cases,

$$G = \begin{cases} 5/3w_1 + w_2 + 1/3w_3 & \text{if } w_1 \le w_2 \le w_3 \\ w_1 + 5/3w_2 + 1/3w_3 & \text{if } w_2 \le w_1 \le w_3 \\ \cdots & \text{if } \cdots \end{cases}$$

Similarly, we consider twenty-four cases in the four-person case, a hundred twenty cases in the five-person case, and so on.

the LDO,

(b) that equations (4.1) and (4.2) are equivalent, and therefore

(c) that Telic Egalitarianism as in equation (4.2) is also subject to the LDO.

My argument, the sceptic continues, is just a mathematical trick. But I believe that my argument is more than a mathematical trick, and that it casts light upon the nature of Telic Egalitarianism.

What I wish to say is this: Telic Egalitarianism as in equation (4.1) *seems* to be subject to the LDO, but actually it is not. Whenever the badness of inequality can be reduced to the weight of each person's well-being, Telic Egalitarianism is not subject to the LDO. Telic Egalitarianism as in equation (4.1) is not subject to the LDO. Call *Weighted Egalitarianism* for Telic Egalitarianism such that the badness of inequality can be reduced to the weight of each person's well-being.

In equation (4.1), the goodness of a distribution is decomposed into two respects: the goodness of aggregated well-being and the badness of inequality. Levelling down is better in the latter respect. On the other hand, in equation (4.2), the goodness of a distribution is decomposed into the individual components. There is no respect with regard to which levelling down is better. The difference between the two equations lies in the ways of *decomposition* of the goodness of distribution. There are many ways to decompose the goodness of distribution into the mutually exclusive respects. We may divide the population into men and women: we first aggregate the goodness of men's well-beings and women's well-beings separately, and then aggregate them into the overall goodness of distribution. Or we may divide the population by geographical region: we aggregate the goodness of distribution in each region separately and then aggregate the goodness of individual regions into the overall goodness. Thus, there are many ways to aggregate the overall goodness of a distribution, and there are many ways to decompose the goodness of a distribution. Telic Egalitarians can choose the respects by which the goodness of a distribution is decomposed.

Telic Egalitarianism holds that inequality is bad in itself, and that a more equal distribution is better than a less equal one. But it is an open question how the badness of inequality is embedded in the overall goodness of a distribution. Equation (4.1) may convey a different sense from equation

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(4.2). However, equations (4.1) and (4.2) always reach the same distributive judgement, and refer the same distributive principle. So there is no difference except the sense each equation conveys. But this difference of senses is derived by rather arbitrary decomposition of goodness of a distribution.

Consider an example. Suppose that you are served a curry-rice at the Indian restaurant. if you eat the rice with some curry source together, you may enjoy that curry rice. On the other hand, if you first eat curry sauce alone and then eat plain rice, you may not enjoy the curry-rice. But it is odd to judge that that curry-rice is bad, if you eat in the latter way. There are several different ways to eat the curry-rice, and the richness of the curry-rice is independent of how you eat that curry-rice. Similarly, the plausibility of Telic Egalitarianism is independent of which respects we decompose the goodness of a distribution. This is why I believe that Telic Egalitarianism as in equation (4.1) is not subject to the LDO, even though it seems to be.

It might be claimed, however, that equation (4.1) does not represent the form of Telic Egalitarianism that Parfit has in mind.[3] The Telic Egalitarianism Parfit considers in the LDO is something like this: the goodness of a distribution is determined by the total well-being and the badness of inequality, the latter of which is not reducible to individual components. More precisely, the goodness of a distribution, G, is given by $G = W - \alpha I$, where W is the total well-being and I is the badness of inequality, the latter of which cannot be reduced into individual components. Equation (4.1) does not represent Telic Egalitarianism of this kind. Thus, it might be pointed out that my argument is not rejecting the LDO that Parfit deploys it.

This worry is partly correct. Telic Egalitarianism, understood in terms of equation (4.1) or (4.2), may not be the one Parfit has in mind. Possibly, the one Parfit has in mind is the following:

$$G = (w_1 + w_2) - \sqrt{|w_1 - w_2|}. \qquad (4.3)$$

In equation (4.3), the badness of inequality is given by the square-root of the absolute difference between persons 1 and 2. Obviously, Telic Egalitarianism, represented by equation (4.3), is subject to the LDO. Moreover, in equation (4.3), the badness of inequality cannot be reduced into the weight of each person's well-being. Admittedly, it is this kind of Telic Egalitarianism that Parfit has in mind in the LDO. It might therefore be suggested that

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[3]This worry was pointed out to me by Thomas Christiano.

my argument in defence of Weighted Egalitarianism does not undermine the force of the LDO.

This, however, does not undermine my argument. Quite the contrary, it shows that my argument is correct. It may be right that Telic Egalitarianism, as represented by equation (4.3), is the one Parfit has in mind. If this is the case, I agree that my argument is not successful in defending the Telic Egalitarianism Parfit has in mind. However, the distributive principles represented as equations (4.1) and (4.2) are also Telic Egalitarianism, and equation (4.2) avoids the LDO. From these, I claim the following. My argument does not reject the LDO entirely. I admit that Telic Egalitarianism as in equation (4.3) is subject to the LDO. I do not deny this. Telic Egalitarianism, as in equation (4.3), may be called *Communal Egalitarianism*. This is because, in equation (4.3), the badness of inequality cannot be reduced to individual components: the badness of inequality is owed by a society as a whole. According to Communal Egalitarianism, equality is like some ghostly extra entity whose good gets counted in with the well-being of actual people. Parfit's LDO focuses on this sort of queer entity. This is why equation (4.3) is subject to the LDO. So I agree that my argument does not defend Communal Egalitarianism from the LDO. However, the distributive principle as in equation (4.2) is also Telic Egalitarianism, and it avoids the LDO. Thus, my argument is defending what I call Weighted Egalitarianism from the LDO. My argument is not intended to defend every form of Telic Egalitarianism, but to find a version of Telic Egalitarianism that avoids the LDO. Therefore, it does not matter whether or not Telic Egalitarianism, as in equations (4.1) or (4.2), would be the one Parfit attempts to criticize in the LDO.

The reach of the LDO is now clear. The LDO is effective against some versions of Telic Egalitarianism, but not others. More specifically, it is effective against Communal Egalitarianism, according to which the bad of inequality cannot be reduced to the weight of people's well-being. But it is not effective against Weighted Egalitarianism. The LDO may give a good reason to support Prioritarianism rather than Communal Egalitarianism. But it does not give any reason to support Prioritarianism rather than Weighted Egalitarianism.

Although I argued that the LDO does not undermine my Weighted Egalitarianism, it is possible to see the discussion of the LDO in a constructive

way. The LDO offers a positive message to Telic Egalitarianism, namely that, whenever one believes in the Principle of Equality, one should adopt Weighted Egalitarianism, not other types of Telic Egalitarianism like Communal Egalitarianism.

4.4 Individualistic Egalitarianism

John Broome has proposed another version of Telic Egalitarianism, which is similar to, but distinct from, Weighted Egalitarianism.[4] I shall consider Broome's version of Telic Egalitarianism, and compare it with my proposed Weighted Egalitarianism.

According to Broome, if inequality is a bad, it is bad for the worse off person: inequality is an individual harm, and individual harm is a negative component of his overall well-being. Let us call his version of Telic Egalitarianism *Individualistic Egalitarianism*, since the bad of inequality is integrated to a part of individual well-being. He calls the amount a person is harmed by inequality his *complaint*. A person's *total well-being* is her well-being, less her complaint. Consider the two-person case, where person 1 is better off than person 2. Broome supposes that the better off person has no complaint but that the worse off person has a complaint proportional to the amount her well-being falls short of the better off person. Then, each person's total well-being is determined by her well-being and the relation between her well-being and other person's well-being. That is, the better off person's complaint is nil, and the worse off person's complaint is $1/2(w_1 - w_2)$, where $1/2$ is some coefficient. Consequently, person 1's total well-being is w_1, and person 2's total well-being is $w_2 - 1/2(w_1 - w_2)$. Likewise, if $w_1 < w_2$, person 1's total well-being is $w_1 - 1/2(w_2 - w_1)$ and person 2's total well-being is w_2.

Now, the overall good of a distribution is given by,

$$G = \begin{cases} w_1 + \{w_2 - 1/2(w_1 - w_2)\} & \text{if } w_1 \geq w_2 \\ \{w_1 - 1/2(w_2 - w_1)\} + w_2 & \text{if } w_1 < w_2. \end{cases} \quad (4.4)$$

It should be noted here that equation (4.4) is mathematically equivalent to equations (4.1) and (4.2). However, yet again, equation (4.4) suggests a different sense than that of equations (4.1) and (4.2). The difference between

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[4]Broome (1991, pp. 180-82).

Broome's Individualistic Egalitarianism and Communal Egalitarianism is obvious. In the former, the bad of inequality is owned by the worse off person, whereas in the latter it is owned by a community as a whole. The difference lies in the ownership of the bad of inequality.

However, the difference between my proposed Weighted Egalitarianism and Broome's Individualistic Egalitarianism is not so obvious. In both versions, the goodness of a distribution is decomposed into individual respects. In this sense, both are "individualistic". The difference is this. In my version, inequality decreases the importance of the better off person's well-being in the overall good of a distribution, and increases the importance of the worse off person's well-being. On the other hand, in Broome's version, inequality decreases the overall well-being of the worse off, but does not affect the well-being of the better off.

Weighted Egalitarianism distinguishes the importance of well-being in the overall goodness of a distribution from well-being itself. To measure each person's well-being itself is one thing, and to fare how much each person's well-being count in the overall goodness of a distribution is quite another. Some people would claim that the importance of well-being may diminish as the absolute level of well-being gets higher.[5] Others would claim that the importance of each person's well-being may augment as the level of well-being gets higher. The importance of individual well-being addresses how much each person's well-being contribute to the overall goodness of a distribution. My Weighted Egalitarianism claims that one's being worse off than others makes his well-being more important, and that a person's being better off than others makes his well-being less important. Thus, in my version, inequality is concerned with the importance of each person's well-being in the overall goodness of distribution.

On the other hand, in Broome's version, inequality is a bad, which decreases the well-being of the worse off person. The bad of inequality is a negative part of a person's well-being. Inequality directly affects the amount of well-being of the worse off person. In Broome's version, inequality is not concerned with the importance of well-being in the overall good of distribution. In my version, it is not the case that inequality decreases the amount of well-being of the worse off person.

It should be asked whether Broome's version avoids the Levelling Down

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[5]This is exactly what Parfit's Prioritarianism claims.

Objection. Like my version, the goodness of a distribution is decomposed into individual respects in Broome's version. However, it avoids the Levelling Down Objection in a strange way. To see this, suppose that $w_1 > w_2$. The well-being of person 1 is given by w_1, and that of person 2 is given by $w_2 - \alpha(w_1 - w_2)$. Now, we should ask a question: how can we level down the well-being of the better off? According to Individualistic Egalitarianism, it is not possible. Lowering w_1 increases the level of $w_2 - \alpha(w_1 - w_2)$. However, levelling down is defined as lowering the well-being of a better off person to the level of a worse off person *without benefiting any person.* In Individualistic Egalitarianism, we can not lower the well-being of a better off without benefiting a worse off person, because if we reduce the level of w_1, the well-being of person 2 is increased. Thus, Individualistic Egalitarianism is formulated in such a way that levelling down is not possible. In this strange sense, Individualistic Egalitarianism avoids the Levelling Down Objection.

Why is Individualistic Egalitarianism strange? It is because Individualistic Egalitarianism takes the bad of inequality of well-being to be a part of well-being. This is a circular way to capture the notion of well-being. That is, we need the measure of well-being to measure the bad of inequality, and we need the measure of inequality of well-being to measure people's well-being. The only way to avoid this circularity is to distinguish a person's overall well-being and his well-being minus the bad of inequality. But what is the latter? I shall not intend to answer this question here.

4.5   Conditional Egalitarianism

I have argued that the Levelling Down Objection is effective against Communal Egalitarianism. However, some Communal Egalitarians may not want to give up the idea that inequality is a communal bad. If one thinks that the Levelling Down Objection is problematic and if he wishes to see inequality as a communal bad, he should reformulate Communal Egalitarianism by restricting the scope of equality. More specifically, he should reformulate Communal Egalitarianism so that equality is not valuable in the case of levelling down but valuable in other cases. I consider this possible response to the Levelling Down Objection in this section.

Telic Egalitarianism claims that equality is valuable. One natural interpretation of this statement is that equality is *always* valuable. This implies

(a) that equality is valuable even when equality does not benefit anybody. From (a), it follows that (b) levelling down is better in terms of equality, thus being subject to the Levelling Down Objection. Obviously, as (b) directly follows from (a), (a) should be modified in order to avoid (b). Communal Egalitarians may not want to give up the phrase "equality is valuable", because it would no longer be Telic Egalitarianism if that claim was given up. Naturally, the focus is directed on the phrase "even if it does not benefit anybody".

One possible reformulation is to replace "even if it does not benefit anybody" by "only when it benefits somebody". This change restricts the domain in which equality is valuable. In the original phrase, equality is always valuable. On the other hand, equality is valuable only when it benefits somebody. As levelling down does not benefit anybody, equality is not valuable and hence levelling down is not better in any respect. Thus, the Levelling Down Objection is avoided.

Recently, along this line of thought, Andrew Mason has proposed *Conditional Egalitarianism*, and claims that it avoids the Levelling Down Objection.[6] It is "Conditional" in the sense that equality is valuable only when equality benefits at least some people. Mason states,

> Whether some people benefit from equality is to be determined by considering other empirically possible states of affairs, in order to see whether there is one in which everyone is better off than they would be under equality or in which some are better off and none worse off.[7]

To put this another way, equality is valuable only when no one can be made better off without making someone else worse off. According to Mason, if there is a state of affairs such that someone's well-being can be

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[6]See Mason (2000, pp. 246-54). He puts forward two versions of Conditional Egalitarianism, CE1 and CE2. CE1 says that equality is extrinsically but non-instrumentally valuable, whereas CE2 says that equality is intrinsically and non-instrumentally valuable. The two are different only in the character of the value of equality. Both agree on the condition under which equality is valuable: equality is valuable only when it benefits at least someone. Since Mason claims this condition allows egalitarianism to avoid the Levelling Down Objection, I shall focus on the condition shared by the two versions, and ignore the distinction of the character of the value of equality.

[7]Mason (2000, p. 248).

made better off without making some other person's well-being worse off, equality does not come into play.

> **Conditional Egalitarianism**: equality is valuable only when there is no state of affairs where some people are better off and no one is worse off than they would be under equality.

To capture the gist of Conditional Egalitarianism, it should be clarified what Mason means by "under equality". He wants to save equality from the Levelling Down Objection and to characterize equality in such a way that it avoids the Levelling Down Objection. If "under equality" means equality at any level, it does not avoid the Levelling Down Objection. Compare again $x = (100, 100)$ and $y = (200, 100)$. In order for equality to be valuable in such a way that the Levelling Down Objection is avoided, "under equality" must mean the well-being level that is strictly higher than that of the worst off in an unequal state of affairs. If this is the case, there must be at least one person who is better off in an equal state of affairs. For example, compare $x' = (101, 101)$ and $y = (200, 100)$. x' is better for one person, and y is better for the other person: there is no state of affairs where some people can be better off without making someone worse off. Therefore, equality is regarded as valuable in this example. Mason wants to say that x' is in one way better than y. However, so far Mason's Conditional Egalitarianism does not tell us which is better, all things considered. All it claims is that the equality is valuable in this example. It does not claim how valuable it is.

Comparing x' and y, however, it might be argued that the benefit for person 2 is almost negligible in comparison with the loss for person 1. Even if equality is regarded as valuable given that it benefits person 2, it might be argued that the loss for person 1 is too large to outweigh the good of equality. Mason's Conditional Egalitarianism may claim that any small improvement of a worse off person outweighs any loss in the total well-being of others. This is because the definition of Conditional Egalitarianism is not itself intended to make an all-things-considered judgement about distributions, and hence it does not say that x' is better than y or that y is better than x'. Since Mason's Conditional Egalitarianism is intended only to avoid the Levelling Down Objection, it does not matter however much well-being a better off person would lose.

Mason is fully aware of the importance of the all-things-considered judgement. He admits that Conditional Egalitarianism might be regarded as "counter-intuitive in some respects", because it regards equality as valuable "even when the alternative is an inequality which would make all but one individual massively better off and that individual only marginally worse off".[8] Mason responds to this counter-intuitive case,

> the organic whole formed by 'equality' and 'some deriving benefit from the state of affairs' is intrinsically valuable, whereas the organic whole formed by 'equality' but 'no one deriving benefit from that state of affairs' lacks any intrinsic value. In the circumstances where equality would marginally benefit just one individual but inequality would make everyone but him massively better off, the value of the organic whole involving inequality and the benefits many derive from it is greater than the value of the organic whole involving equality and the benefit one person derives from it.[9]

Here, it is not clear what the "organic whole" consists in. One interpretation in favour of Mason is that the "organic whole" consists of two respects: the good of equality and the good of total well-being. If this is correct, Mason can say that the relative goodness of distributions is determined by aggregating the good of equality and the good of total well-being.

I should now compare Conditional Egalitarianism with my proposed Weighted Egalitarianism. I think that Weighted Egalitarianism is more plausible than Conditional Egalitarianism for two reasons. Firstly, Weighted Egalitarianism does not impose any restriction on the extent of equality. In Weighted Egalitarianism, equality is always valuable. It is, say, *unconditional* Egalitarianism. Without any restriction on the extent of equality, Weighted Egalitarianism avoids the Levelling Down Objection, and satisfies Pareto. It seems to me that such a restriction on equality is unnecessary. Secondly, in Conditional Egalitarianism, it is not clear at all how to measure the goodness of equality. Mason is aware that the goodness of equality and the goodness of total well-being should be balanced. But I have no idea how we measure the goodness of equality in the Conditional Egalitarian frame-

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[8]Mason (2000, p. 252).
[9]Mason (2000, pp. 252-3).

work. On the other hand, Weighted Egalitarianism clearly encompasses the badness of inequality in terms of the weight given to each person's well-being. Given these two reasons, I believe that my Weighted Egalitarianism is more plausible than Mason's Conditional Egalitarianism.

4.6 Concluding remarks

Parfit's Levelling Down Objection is successful with regard to Communal Egalitarianism but not to my proposed Weighted Egalitarianism. The absurdity of levelling down also arises from the fact that levelling down makes the outcome strictly worse, all things considered. Weighted Egalitarianism avoids the Levelling Down Objection, and judges that levelling down makes the outcome strictly worse, all things considered. In the discussion of levelling down, there are two positive messages for Telic Egalitarians: namely (a) that whenever one believes that equality is valuable in itself, the badness of inequality should be reduced to the weight of each person's well-being, and (b) that any sensible distributive principle should satisfy Pareto. I believe that the discussion of levelling down does not make Weighted Egalitarianism less plausible than Parfit's Prioritarianism. Rather, it clarifies the plausible form of Telic Egalitarianism. The discussion of levelling down does show that Prioritarianism is more plausible than some versions of Telic Egalitarianism. But it does not show that Prioritarianism is more plausible than Weighted Egalitarianism, which is a version of Telic Egalitarianism. The question of whether Prioritarianism is more plausible than my version of Telic Egalitarianism is not answered by considering the levelling down. The answer lies somewhere else. Where does the answer lie, then? Answering this question is the task of the next chapter.

Chapter 5

Weighted Egalitarianism or Prioritarianism?

5.1 Introduction

In the last chapter, I argued that, if equality is valuable, the most plausible form of Telic Egalitarianism is what I call Weighted Egalitarianism. In this chapter, I shall compare Weighted Egalitarianism with Prioritarianism, and elucidate the similarity and difference between the two principles. My discussion in this chapter suggests that the difference between the two principles resides in whether or not strong separability is satisfied: Prioritarianism satisfies strong separability, whereas Weighted Egalitarianism does not. This means that the difference between the two principles is that Prioritarianism is non-relational, whereas Weighted Egalitarianism is relational. In this chapter, I examine one implication of this point. The issue of relationality/non-relationality is understood as the issue of how the weight given to each person's well-being is determined. In Prioritarianism the weight to each person's well-being is determined by the absolute measure of the goodness of well-being. On the other hand, in Weighted Egalitarianism the weight is determined by the rank-order position of the person in the ranking by level of well-being. This is my suggested interpretation as to the difference between the two principles. As this is the main difference, the relative acceptability of the two principles is judged by their relative acceptability in this respect. I shall argue that Weighted Egalitarianism is more plausible than Prioritarianism because of the way it assigns weight to

each person's well-being.

However, I begin by further examining the structure of Weighted Egalitarianism.

5.2 Weighted Egalitarianism: informal analysis

Consider again the simple two-person case of Weighted Egalitarianism. The overall good of a distribution is given by

$$G = \begin{cases} 1/2w_1 + 3/2w_2 & \text{if } w_1 \geq w_2 \\ 3/2w_1 + 1/2w_2 & \text{if } w_1 < w_2 \end{cases} \qquad (5.1)$$

The previous chapter showed that Weighted Egalitarianism, represented as (5.1), avoids the Levelling Down Objection. In addition to this, equation (5.1) suggests several important points about the nature of Weighted Egalitarianism in general, and about the similarity and difference between Prioritarianism and Weighted Egalitarianism in particular. There are three points we ought to notice here.

Firstly, like Prioritarianism, Weighted Egalitarianism gives priority to the worse off. The fact that person 1 is better off than person 2 decreases the importance of person 1's well-being, and increases the importance of person 2's well-being in the overall good of distribution. The importance of the better off person's well-being is less than that of the worse off person's well-being. This implies that, if we increase person 2's well-being by one unit, it contributes to an increase in the overall good of a distribution more than increasing one unit of person 1's well-being. Therefore, Weighted Egalitarianism claims that priority should be given to the worse off person, and in this respect, Prioritarianism and Weighted Egalitarianism make the same claim.

As discussed in chapter 2, if a distributive principle is seen as a version of Prioritarianism whenever it is phrased as "giving priority to ( ), Weighted Egalitarianism, thus construed, must be seen as a version of Prioritarianism, because it certainly gives priority to the worse off. However, as Prioritarianism is meant to be an alternative principle to Weighted Egalitarianism, Prioritarianism should not entail Weighted Egalitarianism. Thus, my discussion here verifies that phrasing of "giving priority to ( )" is not useful for judging which distributive principle is a version of Prioritarianism and

which is not.[1]

Secondly, equation (5.1) suggests that, unlike Prioritarianism, the importance of individual well-being does not diminish or augment as his well-being increases. Prioritarianism claims that the *marginal* importance of each person's well-being decreases as the absolute level of his well-being gets higher. Thus, according to Prioritarianism, the importance of well-being diminishes. On the other hand, according to Weighted Egalitarianism, the marginal importance of a person's well-being does not decrease or increases, even if the absolute level of his well-being gets higher. That is, the importance of well-being does not diminish or augment as the level of well-being gets higher. The goodness of a distribution is an increasing, *linear* function of people's well-being levels.[2]

To see this, consider the weight given to each person's well-being in equation (5.1). Suppose that $w_1 > w_2$. The weight given to w_1 is $1/2$, and the weight given to w_2 is $3/2$. The weight given to each person's well-being remains the same unless w_1 gets lower than w_2. Even if the absolute level of person 1's well-being gets higher, namely w_1 increases to w_1' ($w_1 < w_1'$), the weight given to person 1's well-being remains unchanged, i.e. $1/2$. The following is also the case: even if the absolute level of his well-being gets lower, the weight given to person 1's well-being remains unchanged, unless his well-being gets lower than person 2's well-being. Similarly, even if the well-being level of person 2 gets lower, the weight given to his well-being remains $3/2$. Thus, according to Weighted Egalitarianism, the weight given to each person's well-being does not diminish or augment even when the absolute level of his well-being is changed, as far as the relative ordering of persons 1 and 2 is not altered. The weight given to each person's well-being is altered only when their relative position is changed.

Thirdly, Weighted Egalitarianism is relational. This is obvious, but it is worth emphasizing it here, because equation (5.1) suggests the sense in which Weighted Egalitarianism is relational. If $w_1 \geq w_2$, more weight is given to w_1 than w_2. Otherwise, a more weight is given to w_2 than w_1. Which person gets more weight depends on who is worse off in comparison

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[1]As far as another version of Telic Egalitarianism, Communal Egalitarianism, is concerned, it is not clear whether it gives priority to the worse off. It can be formulated in such a way that priority is given to the worse off. But I do not discuss this issue here, and concentrate on Weighted Egalitarianism.

[2]See Sen (1973, pp. 33-34).

with others, i.e. the relative position of the two. The weight given to each person's well-being is independent of the absolute level of his well-being, so long as the relative position of the two is not changed. It is dependent only on the relative position of the two. The weight given to each person's well-being is determined by the relative position of the two, and it remains unchanged unless the relative position of the two is swapped. Weighted Egalitarianism is relational in the sense that the relative position of the two determines how much each person's well-being counts in the overall good of distribution.

We should make clear a further implication of the third point. In the three-person case, we must consider six possible cases of distribution. Let us only consider a case, where $w_1 > w_2 > w_3$. According to Weighted Egalitarianism, the overall good of a distribution is given by $G = 1/3w_1 + w_2 + 5/3w_3$.[3] Once again, we observe that Weighted Egalitarianism gives priority to the worse off: the well-being of the best off is assigned less weight than that of the second best off, and the well-being of the second best off is assigned less weight than that of the worst off. The crucial point in this case is that the weight given to the best off person's well-being is always $1/3$, regardless of who will be the best off, or how high the absolute level of his well-being will be. Likewise, the weight given to the second best off is always 1, regardless of who will be the second best off. To illustrate, consider two distributions, $x = (10, 5, 1)$ and $y = (6, 3, 1)$. The well-beings of persons 1 and 2 are higher in x than y. According to Weighted Egalitarianism, however, the weight given to the best off is $1/3$, the second best off 1, and the worst off $5/3$ in both distributions. This suggests that the weight given to each person's well-being is determined by its *ranking*: the best off person's well-being gets the weight of $1/3$; the second best off person's well-being gets the weight of 1; and the worst off person's well-being gets the weight of $5/3$. The weight given to each person's well-being is independent of its absolute level. It is fixed by the rank-order position of the person in the ranking by well-being level.

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[3]See footnote 2 on page 63.

5.3 Weighted Egalitarianism: formal analysis

I now consider the general formula of Weighted Egalitarianism. By considering the general formula, we can understand three points we observed in the simple two-person case in a precise way.

The formula in the n-person case can easily be derived from the formula (5.1) in the two-person case. (5.1) is generalized as:

$$G = \sum_i^n w_n - \frac{1}{2n} \sum_i^n \sum_j^n |w_i - w_j|. \tag{5.2}$$

Notice that the badness of inequality is normalized by the number of people in the society.

Let us concentrate on the measure of inequality for the moment. The overall bad of inequality, G^I, is given by:

$$G^I = \frac{1}{2n} \sum_i^n \sum_j^n |w_i - w_j|. \tag{5.3}$$

It is possible to rearrange this equation in various ways. First, bearing in mind that $|a - b| = a + b - 2\min(a, b)$, we have

$$G^I = \frac{1}{2n} (\sum_i^n w_n - \min\{w_i, w_j\}). \tag{5.4}$$

This equation can further be rearranged as

$$G^I = \sum_i^n w_i - \frac{1}{n} \sum_i^n w_i + \frac{2}{n}[w_1 + 2w_2 + 3w_3 + ... + nw_n], \tag{5.5}$$

for $w_1 \geq w_2 \geq w_3 \geq ... \geq w_n$.[4]

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[4] As mentioned earlier, the inequality measures, as in equations (5.2)-(5.4), are known as the *absolute Gini* in economics. The normalized measure is known as the *Gini coefficient*, which is used extensively in practice. The Gini coefficient is given by:

$1 + 1/n - 2/(n^2 \bar{w})[w_1 + 2w_2 + ... + nw_n]$

for $w_1 \geq w_2 \geq ... \geq w_n$ ($\bar{w}$ is average well-being).

Economists usually use the normalized version for two reasons, one arising from Scale Independence, the other from Population Scale Independence. Suppose that, for some reason, the well-beings of all the members of a society are duplicated, e.g. (10,10,20,20) becomes (20,20,40,40). Many economists believe that the value of the inequality measure before and after duplication should be the same: the value of the inequality measure should

Substituting equation (5.5) for equation (5.2), the overall good of a distribution is now expressed as

$$G = \frac{1}{n}\Big(w_1 + 3w_2 + 5w_3 + ... + (2n - 1)w_n\Big) \qquad (5.6)$$
$$= \frac{1}{n}\sum_{i}^{n}(2i - 1)w_i$$

for $w_1 \geq w_2 \geq ... \geq w_n$.[5]

From equation (5.6), it is clear that the goodness of a distribution is the rank-order-weighted sum of individual well-being. Let us verify three points that discussed in the previous section.

Firstly, Weighted Egalitarianism gives priority to the worse off. As equation (5.6) suggests, the weight of the best off person's well-being is less than that of the second best off person's well-being; the weight of the second best off person's well-being is less than that of the third best off person's well-being; ...; and the weight of the $(n - 1)$-th best off person's well-being is less than that of the n-th best off (i.e. the worst off) person's well-being. This implies that if we transfer some benefit from a better off person to a worse off person, we obtain a better distribution without increasing the total well-being. That is, Weighted Egalitarianism satisfies the Pigou-Dalton condition. Both Prioritarianism and Weighted Egalitarianism judge that a

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not be dependent on the scale of well-being. This is why economists normalize the inequality measure by the average well-being in the society. Similarly, suppose that a society with n people merges with another identical society with the same number of people and the same distribution of well-being, e.g. (10,10,20,20) becomes (10,10,10,10,20,20,20,20). Many economists believe that the value of the inequality measure in the combined society with a population of $2n$ should remain the same: the value of the inequality measure should not be dependent on the size of population. This is why many economists normalize the inequality measure by the number of population.

[5]In economics, the social welfare function, based on the Gini coefficient, is called the *Gini social welfare function*. It is usually formulated as

$$G = 1/n^2[w_1 + 3w_2 + ...(2n - 1)w_n],$$

where $w_1 \geq w_2 \geq ... \geq w_n$. See, for example, Blackorby and Donaldson (1978, p. 69). In this standard formula, the overall goodness of a distribution is normalized by the number of people *twice*. This is because economists want to limit the weight of well-being less than one. As we assumed the fixed population size in the introduction, the difference in the normalization does not affect the rest of my argument. Moreover, I do not see why the weight to each well-being should be less than one. This is why I do not normalize twice.

transfer of some benefit from a better off person to a worse off person makes the outcome better.

In section 6 of chapter 2, capitalizing on Dasgupta, Sen, and Starrett (1973), I pointed out that PD-ism is as far as we can go with the Pigou-Dalton condition. At the same time, I emphasized that PD-ism is not helpful in capturing the scope of Prioritarianism because many distributive principles fall under PD-ism. Now, it turns out that Weighted Egalitarianism satisfies the Pigou-Dalton condition. Weighted Egalitarianism also falls under PD-ism.[6] Both Prioritarianism and Weighted Egalitarianism are PD-ism. This is why I claimed that PD-ism is not helpful in capturing Prioritarianism.

Secondly, according to equation (5.6), the goodness of a distribution is a linear function of people's well-being levels. It should be remembered that the Prioritarian betterness ordering of distributions is represented by a functional form, $G = g(w_1) + g(w_2) + ... + g(w_n)$, where $g(\ )$ is a strictly concave function. This means that the importance of each person's well-being diminishes as the absolute level of his well-being gets higher. On the other hand, according to Weighted Egalitarianism, as construed in equation (5.6), the goodness of a distribution is a linear function of well-being levels, not a strictly concave function. The weight given to the well-being of k-th position is $(2k - 1)/n$. The importance of individual well-being does not diminish or augment. The weight is altered only when the rank-order position of the person in the ranking of well-being level is altered.

Thirdly, Weighted Egalitarianism violates strong separability. This is not surprising at all, since Telic Egalitarianism in general is not supposed to be non-relational. Compare $x = (5, 12, 4, 10, 9)$ and $y = (8, 11, 2, 10, 9)$, where the total well-being in x and y are the same. The well-being of persons 4 and 5 are the same in x and y. Slotting these well-beings into equation (5.6), Weighted Egalitarianism judges that y is better than x. Now, compare $x' = (5, 12, 4, 2, 1)$ and $y' = (8, 11, 2, 2, 1)$, where the well-being of persons 4 and 5 are altered. Strong separability claims that y is better than x if and only if y' is better than x'. However, Weighted Egalitarianism construed in equation (5.6) claims that x' is better than y': hence the

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[6]For proof, see Dasgupta, Sen, and Starrett (1973). Of course, they do not call it Weighted Egalitarianism.

violation of strong separability.[7] Prioritarianism is strongly separable, because Prioritarians want to rule out the comparative or relational element from the distributive judgement, and to judge the goodness of each person's well-being independently of other peoples' well-beings. On the other hand, Weighted Egalitarians (or Telic Egalitarians in general) do not seek to do this. Therefore, it is not surprising that Weighted Egalitarianism violates strong separability. What I wish to call attention to here is the following point. I defined Prioritarianism by two conditions, i.e. strong separability and the Pigou-Dalton condition. Weighted Egalitarianism satisfies the latter but not the former. The difference between the two principles is whether or not strong separability is satisfied.

5.4   Relationality and non-relationality

The analysis of equation (5.6) shows (a) that Weighted Egalitarianism gives priority to the worse off and (b) that it is relational. Thus, both Prioritarianism and Weighted Egalitarianism give priority to the worse off. However, Prioritarianism is non-relational, whereas Weighted Egalitarianism is relational. Therefore, the difference between the two principles is that Prioritarianism is non-relational and Weighted Egalitarianism is relational. So the relative acceptability should be judged by whether the plausible principle should be relational or not. If one believes that the relational distributive principle is more acceptable than the non-relational one, one should support Weighted Egalitarianism rather than Prioritarianism. Otherwise, one should support Prioritarianism rather than Weighted Egalitarianism.

It is not easy to judge the relative acceptability of either theory when we know only that Prioritarianism is non-relational and Weighted Egalitarianism is relational. In order to make such a judgement, we also need to consider some of implications of relationality and non-relationality. In this section, I provide an interpretation of relationality and non-relationality. I attempt to argue that the relational principle is more acceptable than the non-relational one, and hence that Weighted Egalitarianism is more acceptable than Prioritarianism.

I have shown that Weighted Egalitarianism violates strong separability

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[7] A class of the Gini measure of inequality, be it absolute or normalized, violates strong separability.

and, therefore, that it is relational. In Weighted Egalitarianism, the weight given to each well-being is determined by the rank-order position of the person in the ranking by well-being level. That is, the weight given to k-th ranked well-being gets the weight of $(2k-1)/n$. So one's relative position to other people determines the weight of his well-being. On the other hand, in Prioritarianism, the weight given to each person's well-being is *given* by the strictly concave function, which is independent of distributions of people's well-being.

Here is a suggested interpretation. Weighted Egalitarianism is relational in the sense that the weight given to each person's well-being is determined by his relative position to other people. Prioritarianism is non-relational in the sense that the weight given to each person's well-being is given by the independent strictly concave goodness function. The difference between Prioritarianism and Weighted Egalitarianism lies in the ways in which we determine the weight given to each person's well-being. In other words, we have to determine how much each person's well-being contributes to the overall goodness of a distribution. If this is correct, the relative acceptability of Prioritarianism and Weighted Egalitarianism depends on how we determine the weight of each person's well-being.

I believe that it is more acceptable to determine the weight of each person' well-being by the rank-order position than by a strictly concave goodness function. The rest of this chapter explains how and why I reach this conclusion.

5.5   Diminishing Moral Goodness revisited

My main worry about Prioritarianism concerns whether the goodness function exists independently of the distribution of people's well-being. In this section, I will examine the law of diminishing moral goodness more closely.

Prioritarians claim that the goodness of a person's well-being diminishes as the absolute level of his well-being gets higher. I think that many people would intuitively agree with this claim. For the sake of argument, let us accept this claim. As my well-being gets higher, I may think that the marginal increase in the goodness of my well-being decreases, although the goodness of well-being itself would never decrease. This may be the case for me, regardless of other people's well-being. In Parfit's Prioritarianism,

a person is worse off in the sense that he is worse off than he might have been. If the goodness of people's well-being is determined independently of other people's well-being, the goodness of my well-being diminishes as the absolute level of my well-being gets higher. Likewise, the goodness of your well-being diminishes as the absolute level of your well-being gets higher. This is true of everyone. However, we need to ask why the goodness of my well-being diminishes in the same way as the goodness of your/his/her well-being. If the goodness of my well-being is determined independently of other people's well-being, it is quite natural to imagine a case where the goodness of my well-being diminishes in a way different to the goodness of your well-being. For example, the goodness of my well-being might diminish steeply; the goodness of your well-being might diminish slowly; the goodness of Simon's well-being might diminish up to a certain level but might be a linear function of his well-being above that level (like the case of the Threshold Principle), and so on. More precisely, if the goodness of each person's well-being does not diminish in the same way, the goodness of an alternative $x = (w_1, w_2, ..., w_n)$ is given by

$$G(x) = g_1(w_1) + g_2(w_2) + ... + g_n(w_n). \tag{5.7}$$

where $g_i(\ )$ is a strictly concave function.

Notice that, in the equation above, the goodness function is indexed. This means that the goodness of each person's well-being diminishes, but that it diminishes in a different way from one person to another. However, in chapter 2, I formulated Prioritarianism as follows.

$$G(x) = g(w_1) + g(w_2) + ... + g(w_n), \tag{5.8}$$

where $g(\ )$ is a strictly concave function.

This equation means that the goodness of each person's well-being diminishes in the same way. There is a gap between the intuition above and the formula of Prioritarianism. The issue here is whether the goodness of everyone's well-being must diminish in the same way. Should the goodness of everyone's well-being diminish in the same way?

Parfit says "yes": the goodness of everyone's well-being diminishes in the same way. According to Parfit, this is exemplified by the law of diminishing *moral* goodness. Parfit explains the law of diminishing moral goodness, by

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drawing an analogy with diminishing marginal *utility*, according to which "if the resources go to people who are better off, they will benefit these people less".[8] Parfit, however, emphasizes the fact that Prioritarianism is concerned with the distribution of well-being, not the distribution of resources. He writes,

> On the telic version of the Priority View, we appeal to a similar claim. We believe that, if benefits go to people who are worse off, these benefits matter less. Just as resources have diminishing marginal *utility*, so utility has diminishing marginal moral importance. Given the similarity between these claims, there is a second similar argument in favour of equality: this time, not of resources, but of well-being. On this argument, whenever we transfer resources to people who are worse off, the resulting benefits will not merely be, in themselves, greater. They will also, on the *moral scale*, matter more.[9]

He continues

> The law of diminishing moral goodness is, in contrast, quite secure. As a moral claim, it always holds. On the Priority View, benefits to the worse off always matter more. This argument for equality is thus more securely grounded.[10]

The question I raised earlier is concerned with this "moral scale".

> Since diminishing marginal utility is an empirical generalization, the Utilitarian argument for equality is, in a way, coincidental. It merely happens to be true that, if people are better off, resources give them smaller benefits.
> On the Priority View, there is no coincidence. It does not merely happen to be true that, if people are worse off, benefits to them matter more. On this view, these benefits matter more because these people are worse off. This is *a fact*, not about the size of these benefits, but about their distribution. And, in telling us

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[8]Parfit (1995, p. 24). Original emphasis.
[9]Parfit (1995, p. 24). Added emphasis.
[10]Parfit (1995, p. 24).

to give priority to such benefits, this view has what Nagel calls 'a built-in bias towards equality'.[11]

Giving some benefits to the worse off contributes more to the overall goodness of a distribution than giving the same benefits to the better off. It is not a matter how much of good a person actually derives from these benefits. How much goodness one person derives from the benefits depends on how people's well-beings are distributed. This is what Parfit means by saying that it is a *fact* about distribution, not about the size of these benefits, that the benefits matter more to those people who are worse off. How much goodness a person derives from the benefits is not the issue. Therefore, the goodness function is not indexed. The goodness function is unique to all the people. That is, the goodness of each person's well-being diminishes in the same way, as his well-being gets higher. According to Parfit, this "always holds". The goodness function, which maps each person's well-being onto the individual component of the overall goodness of distribution, is independent of each individual person. Intuitively, many people might agree that the goodness of a person's well-being diminishes as the absolute level of his well-being gets higher.

5.6   Two criticisms of Prioritarianism

I should now ask why the unique "moral scale" is "securely grounded". According to Parfit, there exists the moral scale. It is "a fact". But I believe it difficult to assume that there exists such a moral scale. I have two criticisms. The first criticism is about the measure of well-being and its effect to the distributive judgement. The second criticism is about whether the measure of the goodness of well-being exists independently of distributions. Prioritarianism requires the independent measure of the goodness of well-being. Weighted Egalitarianism does not require any such measure.

My first criticism is concerned with the measure of well-being and its effect to the distributive judgement. Prioritarianism claims that the goodness of each person's well-being is determined by the absolute level of his well-being and the goodness function, which is determined independently of distributions. The choice of measure of people's well-being, however, effects our distributive judgement.

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[11]Parfit (1995, p. 25). Added emphasis.

To see this, consider a case, where the level of numerical representation of people's well-being is altered. We only alter the level of numerical representation of well-being here. This does not mean that people's actual well-beings are altered. Suppose now that, for some reason (say because of inflation), the level of numerical representation of well-being is increased. Let us consider a simple two-person case, where the goodness function is a quare-root function: a distribution $x = (w_1, w_2)$ is at least as good as $y = (w_1', w_2')$ if and only if $\sqrt{w_1} + \sqrt{w_2} \geq \sqrt{w_1'} + \sqrt{w_2'}$.

Now, compare $x = (5, 20)$ and $y = (12, 12)$. According to the square-root goodness function, y is better than x.[12] Next, suppose that the level of each person's well-being is numerically increased by 100, namely that the level of the well-being is altered by 100. Notice that this alteration does not mean that people's actual well-beings are altered. The comparison we consider is the one between $x' = (105, 120)$ and $y' = (112, 112)$. In this new comparison, according to Prioritarianism, x' is better than y'.[13] I have only changed the way to represent the level of well-being. This means that people's actual well-being remains the same. However, the distributive judgement of Prioritarianism has changed. In this example, I used a square-root function for the Prioritarian goodness function. But this sort of change in the distributive judgement, due to the choice of level of numerical representation of well-being, always takes place so long as the goodness function is non-linear. We should ask why the distributive judgement changes when the level of well-being is altered, although the actual well-being of people remains the same. In Prioritarianism, the choice of level of the measure alters the distributive judgement.

On the other hand, according to Weighted Egalitarianism, this sort of change in the distributive judgement, due to the choice of the level of numerical representation of well-being, does not take place. This is because, in Weighted Egalitarianism, the goodness of a distribution is an increasing, linear function of people's well-being. Recall that equation (5.6) shows that the goodness of a distribution is a linear function of people's well-being. This means that the distributive judgement of Weighted Egalitarianism is

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[12] The goodness of x is $\sqrt{5}(= 2.24) + \sqrt{20}(= 4.47) = 6.71$, whereas the goodness of y is $\sqrt{12}(= 3.46) + \sqrt{12}(= 3.46) = 6.92$. Therefore, y is better than x.

[13] The goodness of x' is $\sqrt{105}(= 10.25) + \sqrt{120}(= 10.95) = 21.20$, whereas the goodness of y' is $\sqrt{112}(= 10.58) + \sqrt{112}(= 10.58) = 21.16$. Therefore, x' is better than y'.

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not affected by the choice of level of well-being.

In chapter 1, I assumed that the quantity of a person's well-being is derived from the individual betterness ordering. More specifically, I assumed that the individual betterness ordering is represented by an increasing, linear utility function. I did not assume a quantitative notion of well-being independently of distributions of people's well-being. Prioritarians assume a quantitative notion of well-being independently. They say that x is better for a person than y, because the quantity of his well-being is greater in x than in y. On the other hand, in the assumption made in chapter 1, the quantitative notion of well-being is defined such that $w_i(x) \geq w_i(y)$ if and only if x is at least as good as for i than y. The quantity of well-being represents the individual betterness ordering cardinally.

As the goodness of a distribution is a linear function of people's well-being, the distributive judgement in Weighted Egalitarianism is not affected by the choice of the level of well-being. However, the distributive judgement in Prioritarianism is affected by such a choice. This sounds odd. But it is not necessarily a knock-down argument against Prioritarianism. Prioritarians may claim the following: the goodness of function is given independently of distributions of people's well-being, but the shape of the function is altered if the level of well-being is altered.

The second criticism is concerned with whether or not there exists a strict concave goodness function, independently of distributions. The goodness function determines how much a person's well-being counts in the overall goodness of a distribution. In Prioritarianism, a person's well-being counts less as the absolute level of his well-being becomes higher. How much each person's well-being counts is given by the strictly concave function, independently of distributions. I have a worry about this claim.

Prioritarians would claim that there is a moral scale of how much a person's well-being counts, just like they claim that there is an absolute measure of well-being.

> It may help to use this analogy. People at higher altitudes find it harder to breath. Is this because they are higher up than other people? In one sense, yes. But they would find it just as hard to breath even if there were no other people who were lower down. In the same way, on the Priority View, benefits to the worse off matter more, but that is only because these people are at a lower

absolute level.[14]

According to Parfit, the relationship between the well-being and how much each person's well-being counts is like the one between the altitudes and how difficult we breath. He thinks that there is an absolute moral scale of how much each person's well-being counts. It is given by the fact, as we saw in the previous section. But I find it difficult to believe that there is no such moral scale, independently of distributions. In my Weighted Egalitarianism, how much a person's well-being counts is determined by the rank-order position of the person in the ranking by well-being level. That is, how much a person's well-being counts is given by distributions. We do not need to assume anything independent of distributions. Prioritarian's claim that the goodness of a person's well-being diminishes may be *intuitively* plausible. But it is nothing more than intuitive appeal. It requires a moral scale that determines how much a person's well-being counts. Arguably, scientists may find that the goodness of a person's well-being is, for example, a square-root function of his well-being, or another strictly concave function. But I doubt that there is any such moral scale.

To see the implication of such independent goodness function, consider the case in which there is only one person in the society. Suppose a situation within which there is only one person: call this person *Robinson*. I should ask whether the goodness of his well-being diminishes as the absolute level of his well-being gets higher. Parfit's answer is "yes". He writes:

> It is irrelevant that these people are worse off *than others*. Benefits to them would matter just as much even if there *were* no others who were better off.[15]

According to Parfit, benefits to Robinson matters more if he is at a lower absolute level. The goodness of his well-being diminishes as the absolute level of his well-being gets higher. But this is hard to believe.

We should clearly distinguish three elements: a person's well-being, the goodness of his well-being, and the goodness of a distribution. It is clear what individual well-being means, so I need not explain it. The goodness of each person's well-being is one individual component of the goodness

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[14]Parfit (1995, p. 23). Original emphasis.
[15]Parfit (1995, p. 23). Original emphasis.

of a distribution. It is concerned with how much each person's well-being contributes to the overall good of that distribution. The overall goodness of a distribution is the aggregated value of the goodness of each person's well-being. In the case of Prioritarianism, individual well-being is w_i. The goodness of individual well-being is $g(w_i)$, where $g(\ )$ is a strictly concave function. And the goodness of a distribution is given by $g(w_1) + g(w_2) + ... + g(w_n)$.

In the one-person case, Robinson's well-being is w_R. The goodness of his well-being is $g(w_R)$. And the goodness of distribution is $g(w_R)$, because there is no other person.[16] Thus, the goodness of Robinson's well-being is equal to the goodness of the distribution. It is more controversial that the goodness of Robinson's well-being diminishes as the absolute level of his well-being gets higher. That is, the goodness of Robinson's well-being diminishes, because Robinson's well-being has less *moral* importance, as the absolute level of his well-being gets higher. I do not see why the goodness of Robinson's well-being is not exactly Robinson's well-being, i.e. why it is

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[16]It is odd to use the term "distribution" in the one-person case. However, I defined a distribution to be a vector of people's well-being. Therefore, according to this definition, there is no problem to use this term for the one-person case.

not identical in quantity.[17]

According to Weighted Egalitarianism, in the one-person case, the good-
ness of Robinson's well-being is equal to his well-being. According to the
general form of Weighted Egalitarianism, the k-th best off person in the n-
person society gets weight of $(2k-1)/n$. In the one-person case, no person is
better off than Robinson, simply because he is the only person. As $n = 1$ in
the one-person case, the weight given to Robinson's well-being is 1. There-
fore, in the one-person case, it is always the case that the goodness of his
well-being is equal to Robinson's well-being. The goodness of his well-being
does not diminish or augment. This difference is not surprising. Prioritari-
ans believe that there is an absolute measure of the goodness of well-being
independently of distributions. This is the case even when there is only one
person in the society. The claim that the goodness of Robinson's well-being
diminishes in the one-person case is the direct consequence of the claim that
there exists the moral scale of the goodness of well-being independently of
distributions. I argued that the latter claim is hard to accept. Therefore,
the former claim, which is the direct consequence of the latter claim, is also
hard to accept. I think that Weighted Egalitarianism is more acceptable

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[17]In this dissertation, I do not consider the betterness underlying the choice under
uncertainty. However, if we consider the betterness defined on prospects, my criticism
will be made clearer. Along this line, Rabinowicz (2002, pp. 16-17) argued against
Prioritarianism as follows.

> suppose there are just two possible equi-probable states, S_1 and S_2, and let
> i have a choice between a risky prospect $y = (o', o'')$ and a safe prospect
> $x = (o, o)$. Assume that o' is better for i than o, which in turn is better for
> i than o''. Suppose, however, that the difference between $g_i(o)$ and $g_i(o'')$ is
> smaller than the difference between $g_i(o')$ and $g_i(o)$. In other words, as com-
> pared with loss in o'' and these two possible outcomes of x, i's gain in o' is
> larger than his loss in o'' and these two possible outcomes of y are equiprob-
> able. Then, prudence dictates that i should choose the risky prospect y. ...
> Suppose, however, that i's smaller loss in o'' outweighs his larger gain in o',
> after the transformation with w: $w(g_i(o')) - w(g_i(o)) < w(g_i(o)) - w(g_i(o''))$.
> Or, what amounts to the same, $w(g_i(o)) > 1/2w(g_i(o')) + 1/2w(g_i(o''))$. Then
> prioritarian morality favours x, even though prudence dictates y.

Note that Rabinowicz is concerned with Prioritarianism for prospect, not for outcome.
Rabinowicz's $g_i(o)$ is taken to be w_i, and his $w(g_i(0))$ to be w_i in this dissertation. It
should also be noted that Rabinowicz's treatment of the Robinson example presupposes
the expectational approach both with respect to the prudential value of prospects and
their moral value.

than Prioritarianism with regard to this point.

To sum up the two criticisms of Prioritarianism, (a) it is hard to believe that our distributive judgment is affected by the choice of the level of people's well-being, and (b) it is hard to believe that there exists an absolute moral scale of the goodness of well-being independently of distributions. On the other hand, in Weighted Egalitarianism, (a′) our distributive judgment is not affected by the choice of the level of people's well-being, and (b′) the goodness of a person's well-being is determined by the rank-order position of the person in the ranking by well-being level, and hence it does not assume the absolute moral scale of the goodness of well-being independently of distributions. Due to these considerations, I believe that Weighted Egalitarianism is more acceptable than Prioritarianism.

5.7 Two possible criticisms of Weighted Egalitarianism

I turn to two possible criticisms of Weighted Egalitarianism. According to Weighted Egalitarianism, the weight given to each person's well-being remains the same unless his relative position with others is not altered. This implies (a) that the weight remains the same as far as his ranking is not altered, even if his well-being is increased or decreased, and (b) that the weight is altered when his ranking is altered, even though his absolute level is not altered. Prioritarians would criticize these two implications of Weighted Egalitarianism. I shall consider the two criticisms, and defend Weighted Egalitarianism against them.

The first criticism runs as follows. Consider two distributions, $x = (100, 200)$ and $y = (10, 200)$. In both distributions, person 1 is worse off than person 2. According to Weighted Egalitarianism, the weight given to the well-being of person 1 is $3/2$ in both x and y; the weight given to the well-being of person 2 is $1/2$ in both x and y. This is because, in Weighted Egalitarianism, the weight of well-being is determined by the rank-order position of the person in the ranking by well-being level.

Some Prioritarians would claim that it is not plausible to give the same weight to the well-being of person 1 in y as the well-being of person 1 in x.[18] They would claim that we should give *more* weight to the well-

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[18]It is not clear that this criticism is raised only by Prioritarians. But I think that

being of person 1 in y than the well-being of person 1 in x: we should register the change of person 1's well-being in terms of moral importance. Weighted Egalitarianism does not register the deterioration of person 1 in terms of moral importance. On the other hand, Prioritarianism gives more weight to the well-being at a lower absolute level. Therefore, according to some Prioritarians, Prioritarianism is more acceptable than Weighted Egalitarianism.

I disagree. It is not at all clear why we should register the deterioration of person 1 in terms of moral importance. Remember that Weighted Egalitarianism satisfies the Pigou-Dalton condition: it gives more weight to the well-being of the worse off. Bearing this in mind, the goodness of x and y is given as follows.

Goodness of x : $(1 + 1/2)100 + (1 - 1/2)200 = 150 + 100 = 250$
Goodness of y : $(1 + 1/2)10 + (1 - 1/2)200 = 15 + 100 = 115$

In moving from x to y, the well-being of person 1 is decreased by 90 units. In the same move, the goodness of distribution is decreased by 135 units, and the goodness of person 1's well-being is decreased by 135 units, too. Weighted Egalitarianism registers the decrease of person 1's well-being with a special weight in terms of the goodness of person 1's well-being and consequently the goodness of the distribution. I think this is enough. I do not see why we need to give more weight to the well-being of person 1 in terms of moral importance. My point is that if a distributive principle, be it Weighted Egalitarianism or other form of Egalitarianism, satisfies the Pigou-Dalton condition, it is not seriously undermined by this sort of criticism. If we give priority to the worse off, we need not be too sensitive to the change in absolute level of each person's well-being.[19]

The second criticism would run as follows. Let us consider the three-person case. In the three-person case, the weight given to the best off is 1/3, the weight given to the second best off is 1, and the weight given to the worst off is 5/3. Now, compare $x = (100, 200, 10)$ and $y = (100, 200, 150)$, where the well-beings of persons 1 and 2 remain the same, but the well-being of

Prioritarians could appeal to this property of Weighted Egalitarianism, when they criticize Weighted Egalitarianism. For this line of criticism, see Atkinson (1970) and Dasgupta, Sen and Starrett (1973).

[19]For a similar argument against this sort of criticism, see Sen (1973, p. 34).

person 3 is altered in moving from x to y. In x, the weight given to person 1 is 1. In y, it is altered to 5/3. The rate of substitution between persons 1 and 2 is also altered. These changes of weight take place, although the absolute level of persons 1 and 2 remains the same. Then, some Prioritarians would claim this to be odd. They might ask how plausibly the weight of person 1's well-being could be altered without altering his well-being. They should also ask how the rate of substitution between persons 1 and 2 is altered without changing the well-being level of persons 1 and 2.

The weight given to person 1's well-being is altered because his rank-order position is changed. In x, person 1 is the second best off. In y, he is the third best off, i.e. the worst off. Weighted Egalitarianism determines the weight of each person's well-being, or how much each person's well-being counts in the goodness of a distribution, by the rank-order position of the person in the ranking by well-being level, and hence violates strong separability. It is not surprising that the weight given to person 1's well-being is altered even if his well-being remains the same. Those Prioritarians might imply that the weight given to person 1's well-being should not be altered if his well-being remains the same. This is because they believe in strong separability. So their criticism is based on the claim that a plausible distributive principle should satisfy strong separability. According to them, strong separability is a desirable property.

Parfit would think that strong separability is a desirable property. The motivation behind Prioritarianism was the Levelling Down Objection. Parfit thinks that Telic Egalitarianism is subject to the Levelling Down Objection. Then, Parfit claims that a plausible distributive principle should be non-relational. I claim that non-relationality is best represented by strong separability. But, in chapter 3, I showed that Weighted Egalitarianism is not subject to the Levelling Down Objection. Moreover, in this chapter, I showed that Weighted Egalitarianism violates strong separability and is thus relational. As it is not subject to the Levelling Down Objection, there is no reason to stick to the idea that strong separability is a desirable condition. So this line of criticism that Weighted Egalitarianism violates strong separability is not well grounded once it is shown that Weighted Egalitarianism avoids the Levelling Down Objection.[20]

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[20]I should note that some economists and policy makers take strong separability to be a desirable property for the inequality measures, because strongly separable inequal-

I think that these two criticisms of Weighted Egalitarianism are rejected.

5.8   Leximin: a way out for Prioritarianism?

I raised two criticisms of Prioritarianism. However, I did not conclude that Prioritarianism is totally implausible. I only said that Weighted Egalitarianism is more acceptable than Prioritarianism with regard to these two respects. This is because Prioritarianism may avoid these two criticisms and consequently the third criticism of the one-person case if Prioritarians are ready to change one of their main claims. In chapter 2, I argued that Leximin may be a version of Prioritarianism if Prioritarians are ready to replace the Pigou-Dalton condition by Hammond equity. As I discuss below, Leximin avoids my criticisms of Prioritarianism. Therefore, Leximin may be more acceptable than the Prioritarianism, defined by strong separability, Pareto, and the *Pigou-Dalton condition*. However, I shall argue that Leximin is implausible anyway. Thus, my conclusion is that Weighted Egalitarianism is more acceptable than any possible form of Prioritarianism.

In chapter 2, I defined Prioritarianism by strong separability, Pareto, and the Pigou-Dalton condition. In the same chapter, I argued that Leximin satisfies strong separability and Pareto, but makes a much stronger claim than the Pigou-Dalton condition. It satisfies Hammond equity. Hammond equity claims that if there is a decrease in well-being of a better off person and an increase in well-being of a worse off person (without any reversal of the relative positions) and everyone else is indifferent, then the new distribution

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ity measures can explain how much of inequality in a variable (typically income in economics) can be explained by relevant characteristics (such as age, sex, race, schooling, or region). In theory of inequality measures, strong separability became known as *decomposability*. For example, how much of well-being inequality in the United Kingdom can be attributed to inequality amongst England and Scotland, and how much to inequality within England and amongst Scotland respectively? Decomposability links overall inequality to "between-group" inequality and "within-group" inequality. More specifically, a class of decomposable inequality measure represents the overall inequality as a function of inequality between the constituent subgroups, and inequality between the subgroups. Decomposability claims that "inequality rankings of alternative distributions in the population as a whole should match the inequality rankings of the corresponding distributions within any the subgroups of which the population is composed" (Cowell 1995, p. 57). However, even if we accept the practical usefulness of decomposability, it is not clear its acceptability as a general condition for the inequality measure. On this issue, see Foster and Sen (1997).

is better.

Leximin is a discontinuous betterness ordering. It can not be represented by a functional form. It does not claim that the Prioritarian goodness function is a strictly concave function, and this is because it cannot be represented by a functional form. It need not care about the form of goodness function. My second criticism of Prioritarianism was concerned with the claim that the absolute moral scale of the goodness of well-being exists independently of distributions of people's well-beings. Since Leximin needs no such moral scale, it avoids my second criticism.

Leximin avoids my first criticism, too. As Leximin compares the level of the worse off person across distribution, it only requires ordinal well-being comparison. Leximin does not require the cardinal measure of people's well-being. In Leximin, our distributive judgement is not affected by the choice of the level of people's well-being, simply because it does not require such choice of the level. Therefore, Leximin avoids my first criticism, too.

Leximin may avoid my two criticisms. In which case, it may be more acceptable than Prioritarianism as such. However, there is a drawback.[21] Recall that the Pigou-Dalton condition claims that, keeping the total well-being being constant, the transfer of well-being from a better off person to a worse off person makes the outcome better. On the other hand, Hammond equity claims that any transfer of well-being, however small, makes the outcome better insofar as the relative position of a better off person and a worse off person is reversed. This implies that any loss of well-being for a better off person, however massive, is outweighed by any small gain of well-being for a worse off person, however small. I think that this is too demanding and, therefore, that many Prioritarians would not wish to give up the Pigou-Dalton condition. Even if Leximin may avoid two of my criticisms, the cost incurred from adopting Leximin seems to be too great.

I think now that my claim that Weighted Egalitarianism is more acceptable than Prioritarianism is conclusive. Given the two criticisms I pointed out, Weighted Egalitarianism is more acceptable than Prioritarianism as defined by strong separability, Pareto, and the Pigou-Dalton condition. If Prioritarians adopt Leximin, they can avoid two criticisms. But it incurs a cost: Leximin rules out the trade off between the well-being of the worse off

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[21]As I discuss in chapter 7, this is not necessarily a drawback. Those who criticize interpersonal aggregation would find this "drawback" to be an advantage.

and the well-being of the better off. Although Leximin avoids my two criticisms, it does not make Prioritarianism more acceptable. Leximin may be less acceptable than Prioritarianism defined by strong separability, Pareto and the Pigou-Dalton condition precisely because of this cost. I considered two possible criticisms of Weighted Egalitarianism, and argued that these criticisms do not undermine Weighted Egalitarianism. I believe that Weighted Egalitarianism is more acceptable than Prioritarianism.

Chapter 6

Equality, Priority, and Time

6.1 Introduction

The shape of people's lives is diverse. Lives go up and down: some people
have a happy childhood and an unhappy middle age life; other people, the
other way round. Some people live a blissful life throughout, while others
suffer hardship throughout.

Many philosophers think that people's whole life should be the basic unit
in judging the goodness of distributions. They think that our distributive
judgement should be based on a person's lifetime well-being, not a temporal
part of the life. They think that we should first estimate the amount of well-
being within each person's complete life, and that the lifetime well-being
should then be considered whenever we evaluate the distribution of different
people's well-being. They give priority to *intra*personal aggregation over
*inter*personal aggregation. Let us call this the *lifetime view* in distributive
judgement. Many non-utilitarians take this view.

For example, in explicating his envy test in the hypothetical auction,
Ronald Dworkin writes,

> [i]f we look for envy at particular points in time, then each envies
> Adrian's resources at the end of year, and the division is therefore
> not equal. But if we look at envy differently, as a matter of
> resources over an entire life, and we include a person's occupation
> as part of the bundle of his goods, then no one envies Adrian's
> bundle, and the distribution cannot be said to be unequal on

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that account.[1]

Similarly, Thomas Nagel believes that the unit of distributive judgement should be lifetime well-being. He says that a person's complete life "determines the size of the units over which a distributive principle operates"[2]. John Rawls also seems to maintain the lifetime view, according to whom the parties in the original position choose the principles of basic social structure, considering the life expectations of representative people. So his difference principle is concerned with the comparison of social primary goods over complete lives.[3]

However, recently, the lifetime view has been challenged by Dennis McKerlie and Larry Temkin.[4] They claim that the distribution of well-being at each temporal stage should be taken into account, and that the lifetime view fails to capture the relevance of the distribution at each period.

In this chapter, I consider the plausible temporal unit of well-being for Prioritarianism and Telic Egalitarianism. I shall argue that both the distribution of lifetime well-being and the distribution of well-being at a time are relevant for Prioritarianism and Telic Egalitarianism. However, when we consider the plausible unit of well-being in our distributive judgement, some Prioritarians may claim that Prioritarianism is more acceptable than Telic Egalitarianism. I shall argue against this claim. I think that the consideration of the plausible temporal unit of well-being does not provide us with a reason to support Prioritarianism over than Telic Egalitarianism.

Preliminaries. In this chapter I only consider the two-person two-period case, where each person lives in the same time and each period is equally long. I shall represent the spread of people's well-being at different periods as follows.

	T1	T2
person 1	w_1^1	w_1^2
person 2	w_2^1	w_2^2

[1] Dworkin (1981, pp. 304-305).

[2] Nagel (1979, p. 124n). In his later work, Nagel (1991, p. 69) writes that "[r]emember that the subject of an egalitarian principle is not the distribution of particular rewards to individuals at some time, but the prospective quality of their lives as a whole, from birth to death".

[3] Rawls (1971, p. 78, P. 178).

[4] McKerlie (1989, 1994, 1997) and Temkin (1993, ch. 8).

The superscript index indicates the time period, and the subscript index indicates the person. It is not difficult to extend the argument in this chapter to the n-person case. However, it is too complicated to discuss in one chapter. So I shall concentrate on the simplest case. In this chapter, I shall consider two different betterness orderings. The one is the betterness ordering defined on a vector of well-being at each period, e.g. (w_1^1, w_2^1). I shall call a set of well-being at a period *distribution*. The other is the betterness ordering defined on alternatives, which is a matrix of people's well-being at each period, e.g. $(w_1^1, w_1^2, w_2^1, w_2^2)$. In this chapter I am primarily concerned with the betterness of alternatives. I shall discuss whether Prioritarianism is more plausible than Telic Egalitarianism with regard to the betterness ordering of alternatives. It might be confusing to use two different types of betterness ordering, but I shall clearly indicate which betterness ordering I am talking about, whenever I say "( ) is better than ( )" throughout this chapter .

6.2 The lifetime view

Let us start with defining the lifetime view in general, and then examine lifetime Egalitarianism and lifetime Prioritarianism respectively. Dennis McKerlie explains the lifetime view as follows.

> [The lifetime view] says that different people's share of resources, or welfare, should be equal when we consider the total amounts of those things that they receive over the complete course of their lives. To apply this view we would begin by estimating the size of a person's share of the relevant good things at each temporal stage of that person's share in terms of a complete life. Finally this share would be compared with the shares of other people over their complete lives in order to test for equality.[5]

Let us put this in a general way. First, we aggregate a person's well-being at each life stage within his life. Call the aggregated value of his well-being-at-a-time his *lifetime well-being*. The process of intrapersonal aggregation of temporal well-being need not be additive. But, in his chapter, for simplicity, let us assume that a person's lifetime well-being is given by the

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[5]McKerlie (1989, p. 476).

sum of his well-being at each period. Next, a distributive principle considers how people's lifetime well-beings should be distributed, and determines the overall goodness of an alternative. This establishes the relative goodness, or betterness, of alternatives.

The lifetime view, thus understood, is a general framework for distributive principles. Many distributive principles can operate within this framework. I shall discuss two types of distributive principle within this framework: lifetime Egalitarianism and lifetime Prioritarianism.

6.2.1 Lifetime Egalitarianism

Lifetime Egalitarianism determines the relative goodness of alternatives as follows. First, it determines the lifetime well-being of each person by aggregating the well-being of all stages of his life. Then, it compares the lifetime well-beings of different people, and determines the overall goodness of each alternative by combining the aggregated value of lifetime well-beings of different people and the disvalue of inequality between the lifetime well-beings of different people. Let us assume that the disvalue of inequality is given by the absolute difference between lifetime well-beings. Call this *lifetime inequality*. Lifetime Egalitarianism claims that an alternative x is better than y if and only if the aggregated value of each person's lifetime well-beings and divalue of lifetime inequality in x is greater than that in y.

Suppose that there are two persons, 1 and 2, who live equally long lives at the same period. Suppose further that their lives are divided into two equally long life stages, T1 and T2. The good of an alternative is given by the good of the total lifetime well-beings and the bad of inequality between different peoples' lifetime well-beings. That is, the goodness of an alternative is given by $[(w_1^1 + w_1^2) + (w_2^1 + w_2^2)] - 1/2[(w_1^1 + w_1^2) - (w_2^1 + w_2^2)]$. Then, lifetime Egalitarianism is stated as follows.

> **Lifetime Egalitarianism:** $x = (w_1^1, w_1^2, w_2^1, w_2^2)$ is at least as good as $y = (\bar{w}_1^1, \bar{w}_1^2, \bar{w}_2^1, \bar{w}_2^2)$ if and only if $\mathbf{w}_1 + \mathbf{w}_2 - 1/2|\mathbf{w}_1 - \mathbf{w}_2| \geq \bar{\mathbf{w}}_1 + \bar{\mathbf{w}}_2 - 1/2|\bar{\mathbf{w}}_1 - \bar{\mathbf{w}}_2|$, where $\mathbf{w}_i = w_i^1 + w_i^2$.

Consider alternative A, where person 1's lifetime well-being is equally as good as person 2's lifetime well-being, but person 1 is better off than person 2 at T1, and person 2 is better off than person 1 at T2. Then, compare it

with another alternative B, where the temporal well-beings of persons 1 and 2 are the same in T1 and T2. The matrices are given below.

	T1	T2			T1	T2
1	16	4		1	10	10
2	4	16		2	10	10
Alternative A				Alternative B		

In alternative A, lifetime Egalitarianism first aggregates the well-being of T1 and T2 for each person: person 1's lifetime well-being is 20, and person 2's is 20. Then, it compares person 1's lifetime well-being and person 2's well-being: person 1's lifetime well-being is equally as good as person 2's. Lifetime Egalitarianism judges that there is no inequality between person 1's and person 2's well-beings. Likewise, in alternative B, each person's lifetime well-being is 20, and there is no inequality between the lifetime well-beings of persons 1 and 2. Therefore, lifetime Egalitarianism claims that alternative A is equally as good as alternative B.

However, many Telic Egalitarians would disagree. They would claim that alternative B is better than alternative A. Why is this? In alternative A, there is inequality between persons 1 and 2 at both T1 and T2, whereas, in alternative B, there is no inequality at either T1 or T2. Let us call inequality at a period *temporal inequality*. Those who judge that alternative B is better than alternative A believe that temporal inequality is relevant in considering the relative goodness of alternatives. Given that lifetime Egalitarianism judges that alternative A is equally as good as alternative B, it implies that the temporal inequality is not relevant as far as the lifetime well-beings are at the same level. Lifetime Egalitarianism is defined so as to be concerned with inequality between different people's lifetime well-beings. So, by definition, it does not care about the temporal inequality between one person's well-being at a period and another person's well-being at the same period, or how one person's well-being is distributed within his own life. However, I think that many Telic Egalitarians would find it implausible because temporal inequality is relevant in judging the goodness of an alternative.

To be fair, lifetime Egalitarianism may be able to register temporal inequality in a certain way. It registers the temporal inequality in such a way that temporal inequality does not affect the distributive judgement so long

as the lifetime well-beings are at the same level. Consider alternative A again. In alternative A, there is a temporal inequality at T1 and another temporal inequality at T2. At T1, person 1 is better off than person 2. At T2, person 2 is better off than person 1 as much as person 1 is better off than person 2 at T1. In lifetime Egalitarianism, the temporal inequality at T1 is seen to be *cancelled out* by the same amount of temporal inequality at T2.[6]

However, the cancelling-out of temporal inequality turns out to be implausible. This is because if the inequality at a period is seen to be cancelled out by the same amount of inequality at another period, then what McKerlie calls "changing places egalitarianism" is justified. He writes,

> [Lifetime Egalitarianism] does not see any disvalue in inequality between parts of lives as long as the inequality is compensated for at earlier or later times so that there is no inequality between complete lives. This enables us to imagine a new kind of egalitarian society. It contains great inequality, with happier lives attached to certain social positions. But at a fixed time people change places and switch from a superior position to an inferior one or vice versa. One example would be a feudal society in which peasants and nobles exchange roles every ten years. The result is that people's lives as wholes are equally happy. Nevertheless during a given time period the society contains great inequality, and in one sense this always remains true.[7]

McKerlie claims that many Telic Egalitarians would find the changing places egalitarianism to be implausible. I agree with McKerlie. This is because we believe that the egalitarian concern is not best captured by lifetime Egalitarianism. The egalitarian concern should take the temporal inequality seriously. Thus, the lifetime well-being is not the plausible temporal unit for Telic Egalitarianism.

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[6]Nagel (1979, p. 120) discusses the compensation over time within a life in order to support the lifetime view. He writes that "[b]y itself, the possibility of intrapersonal compensation neither supports nor undermines egalitarian theories. It implies only that if an egalitarian theory is accepted, it should apply only across lives rather than within them. It is a reason for taking individual human lives, rather than human experiences, as the units over which any distributive principle should operate."

[7]McKerlie (1989, p. 479).

At this stage, what I wish to claim here is that lifetime Egalitarianism is implausible because it does not consider temporal inequality at all. I do claim that temporal inequality is relevant, but not that the lifetime inequality is irrelevant.

6.2.2 Lifetime Prioritarianism

Let us turn to lifetime Prioritarianism. In general, Prioritarianism claims that "[b]enefiting people matters more the worse off these people are"[8], where "the worse off" means the well-being at a lower absolute level. That is, giving some benefit to the well-being at a lower absolute level yields more good than giving it to the well-being at a higher absolute level. Lifetime Prioritarianism assigns more weight to the lifetime well-being at a lower absolute level than the lifetime well-being at a higher absolute level. Like lifetime Egalitarianism, lifetime Prioritarianism first determines the lifetime well-being of each person by aggregating the well-being at a time across time. Then, it determines the overall goodness of alternatives by assigning more weight to lifetime well-beings at a lower absolute level. Lifetime Prioritarianism is stated as follows.

> **Lifetime Prioritarianism:** $x = (w_1^1, w_1^2, w_2^1, w_2^2)$ is at least as good as $y = (\bar{w}_1^1, \bar{w}_1^2, \bar{w}_2^1, \bar{w}_2^2)$ if and only if $g(\mathbf{w}_1) + g(\mathbf{w}_2) \geq g(\bar{\mathbf{w}}_1) + g(\bar{\mathbf{w}}_2)$, where $\mathbf{w}_i = w_i^1 + w_i^2$ and $g(\ )$ is a strictly concave function.

Compare alternatives A and B again. As each person's lifetime well-being is 20 in alternatives A and B, the lifetime well-beings of the two are at the same absolute level. No one is worse off in terms of the absolute level of lifetime well-being. Then, lifetime Prioritarianism, like lifetime Egalitarianism, claims that alternative A is equally as good as alternative B.

However, just like the case of lifetime Egalitarianism, many Prioritarians would think that alternative B is better than alternative A. According to Prioritarianism, the well-being at a lower absolute level should be assigned more weight in our distributive judgement. In alternative A, person 2 at T1 and person 1 at T2 are worse off in absolute terms. They could have been better off in alternative B, even though, in alternative B, person 2 could

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[8]Parfit (1995, p. 19).

have been worse off at T2 and person 1 could have been worse off at T1. There seems to be a good reason for Prioritarians to judge that alternative B is better than alternative A. However, lifetime Prioritarianism judges that alternative A is equally as good as alternative B. Lifetime Prioritarianism does not capture the relevance of the lower absolute level of well-being at each period.

Someone might still support lifetime Prioritarianism on the basis that, in alternative A, person 1's being worse off at T2 is compensated for by his being better off at T1. Similarly, he might claim that person 2's being worse off at T1 is compensated for by his being better off at T2. Given this intrapersonal compensation over time, neither person 1 nor 2 is worse off after all. If this is the case, Prioritarians will allow what may be called "changing places Prioritarianism". But I think that many Prioritarians will still find this implausible, since they might be concerned with the fact that person 2 at T1 and person 1 at T2 are at a lower absolute level.

Many Prioritarians would claim that the lower absolute level of well-being at a period is relevant. They claim that the lifetime well-being is not the only consideration in giving priority. They think that the level of well-being at each temporal stage should be considered if it is at a lower absolute level. Prioritarians would disagree with lifetime Prioritarianism.

6.3 The time slice view

If the inequality, or the absolute level of well-being, at each period is seen to be a relevant consideration, then the lifetime well-being is not the plausible temporal unit in our distributive judgment. The lifetime view should be rejected. There therefore seems to be a good reason to consider the possibility of the *time slice view* of distributive judgement.[9] Let us consider whether

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[9]This is what McKerlie (1989) calls the *simultaneous time slice view*. He examines another version of time slice view, i.e. the *corresponding time slice view*. The corresponding time slice view "divides all lives into the same series of temporal parts. ... It measures equality by comparing the corresponding stages, rather than the simultaneous stages, of different lives" (483). Consider the following example, where each person's life is divided into three stages an two persons live at different timing.

	T1	T2	T3	T4
i	3	4	2	$\emptyset$
j	$\emptyset$	1	4	4

this alternative view is plausible.

The time slice view holds that the temporal unit of individual well-being is the well-being at a period, and hence that the distributive judgement should be made by considering how the different people's well-beings at each period is distributed. In judging the goodness of an alternative, the time slice view takes a two-step process. In the first step, it determines the goodness of a distribution at each period respectively. In the second step, it aggregates the goodness of the distribution at each temporal period across time, and determines the overall goodness of an alternative.

Consider a simple two-person two-period case. First, the time slice view aggregates the goodness of the distribution at each period. Let $G^1 = g(w_1^1, w_2^1)$ be the goodness of the distribution at T1, and $G^2 = g(w_1^2, w_2^2)$. Then, the overall goodness of an alternative, G, is given by $G = h(g(w_1^1, w_2^1), g(w_1^2, w_2^2))$, where $h(\ )$ is an increasing function.

It should be noticed that, in the two-step process of the time slice view, the goodness of a distribution at a period is determined independently of distributions at other periods, and, eventually, the goodness of distributions at different periods are aggregated into the overall goodness of an alternative. The goodness of a distribution at a period is estimated without referring to distributions of other periods. The time slice view then proceeds the estimation of goodness of a distribution at other periods in the same way. Let us state this feature of the time slice view as *separability of time*.

> **Separability of time**: the goodness of a distribution at a period
> is determined independently of distributions at other periods.

To capture the gist of the idea, compare alternatives A and C, and between alternatives A′ and C′, where $w_i \neq w_i'$ and $w_j \neq w_j'$ at T2 respectively.

	T1	T2			T1	T2
i	16	w_i		i	14	w_i
j	4	w_j		j	6	w_j
	Alternative A				Alternative C	

In this example, the corresponding time slice view compares i at T1 with j at T2, i at T2 with j at T3, and i at T3 with j at T4. On the other hand, the (simultaneous) time slice view only compares i at T2 with j at T2, and i at T3 with j at T3. However, I shall not consider this version of the time slice view here.

	T1	T2		T1	T2
i	16	w'_i	i	14	w'_i
j	4	w'_j	j	6	w'_j
Alternative A'			Alternative C'		

Separability of time claims that alternative A is better than C if and only if alternative A' is better than C'. That is, if the distribution at T2 is the same, the relative goodness of two alternatives is determined by the relative goodness of distribution at T1, regardless of a distribution at T2. According to separability of time, the goodness of distribution-at-a-period is independent of the distribution of other periods.

Separability of time has an interesting implication, namely, that the unity of each person's well-being at different periods within his life does not matter. In other words, it does not matter who bears how much well-being across periods. As the goodness of distribution-at-a-period is determined independently of distributions of other periods, how much well-being one person has through his lifetime is irrelevant. If the lifetime well-being is thought to be relevant, at least to some extent, then who bears how much well-being across time should be relevant: the unity of well-being at different periods is relevant. However, according to the time slice view, this is not relevant in judging the goodness of alternatives, because of the separability of time. Although I shall argue against separability of time, and hence against the time slice view in a later section, I now apply the time slice view to Egalitarianism and Prioritarianism in order to assess the scope of these principles.

For simplicity, I shall assume that the goodness of an alternative is the sum of the goodness of the distributions at each period. The goodness of an alternative need not be an additive function of the goodness of the distributions at each period. Given that additive function implies that the goodness of distribution at a time is determined independently of distributions at other times, this assumption does not affect my argument in the following sections.

6.3.1 Time slice Egalitarianism

Time slice Egalitarianism was first discussed by McKerlie. According to McKerlie's original definition, time slice Egalitarianism seeks to "minimize

the sum total of inequality-at-a-time".[10] More specifically, it first measures the inequality at each time, and then *adds up* the inequality-at-a-time over time. Thus, it claims that we should minimize the total sum of inequality-at-a-time.

Consider alternatives A and B. In alternative A, there are 12 units of inequality between person 1's and person 2's well-beings at T1, and 12 units of inequality at T2. According to McKerlie, time slice Egalitarianism adds up the inequality at T1 and inequality at T2. If we add up the inequality at each stage, the overall inequality is 24 units. On the other hand, in alternative B, there is no inequality at either T1 or T2, and hence the sum total of temporal inequality is nil. Therefore, McKerlie's time slice Egalitarianism judges that alternative B is better than alternative A. This is all that McKerlie's definition claims.

McKerlie's definition of time slice Egalitarianism needs to be refined, however. According to his definition, time slice Egalitarianism is not about the overall goodness of an alternatives. It is about betterness in terms of equality. McKerlie's definition is plausible only when the total well-being of alternative is the same across alternatives. Otherwise, it turns out to be implausible. What the definition above literally claims is that, if the total well-being across time and people is the same, x is better than y if the total sum of inequality-at-a-time in x is smaller than y. If the antecedent is not true, McKerlie's definition is not plausible. To see why, compare two alternatives below.

	T1	T2			T1	T2
1	16	4		1	26	14
2	4	16		2	14	26
	Alternative A				Alternative D	

In both alternatives A and D, the temporal inequality at each period is 12. If we add up the temporal inequality across time, the overall inequality is 24 in both alternatives A and D. Thus, according to McKerlie's definition of time slice Egalitarianism, alternative A is equally as good as D. But this is implausible. In alternative D, the total well-being across time and people is much greater than in A. So, if the total well-being is not the same, McKerlie's definition turns out to be implausible. This suggests that the

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[10]McKerlie (1989, p. 481).

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total well-being at each period and the inequality at each period should be combined at each period in some way.

I now wish to define a plausible form of time slice Egalitarianism. For simplicity, the goodness of a distribution at each temporal stage is given by the sum of each person's well-being at the same temporal stage and the absolute difference between the better off person's well-being and the worse off person's well-being. So, the goodness of a distribution at a time is determines by the total well-being at a time and the bad of inequality at that same time. That is, the goodness of the distribution at T1, G^1, is given by $G^1 = (w_1^1 + w_2^1) - 1/2|w_1^1 - w_2^1|$. Then, the overall goodness of alternative is given by the sum of goodness of the distribution at each period. That is, the goodness of alternative, G, is given by $G = (w_1^1 + w_2^1) - 1/2|w_1^1 - w_2^1| + (w_1^2 + w_2^2) - 1/2|w_1^2 - w_2^2|$. This is to say, $G = \sum_i^2 \sum_t^2 w_i^t - 1/2(|w_1^1 - w_2^1| + |w_1^2 - w_2^2|)$. Time slice Egalitarianism is stated as follows.

> **Time slice Egalitarianism:** $x = (w_1^1, w_1^2, w_2^1, w_2^2)$ is better than $y = (\bar{w}_1^1, \bar{w}_1^2, \bar{w}_2^1, \bar{w}_2^2)$ if and only if $\sum_i^2 \sum_t^2 w_i^t - 1/2(|w_1^1 - w_2^1| + |w_1^2 - w_2^2|) > \sum_i^2 \sum_t^2 \bar{w}_i^t - 1/2(|\bar{w}_1^1 - \bar{w}_2^1| + |\bar{w}_1^2 - \bar{w}_2^2|)$.

Consider alternatives A and D again. The goodness of alternative A is $40 - 12$. The goodness of alternative D is $80 - 12$. Therefore, time slice Egalitarianism, thus construed, judges that alternative D is better than alternative A.

Unlike lifetime Egalitarianism, according to time slice Egalitarianism, the inequality at T1 is not cancelled out by the inequality at T2: it sees that the inequality at T1 is bad, and that the inequality at T2 makes the alternative even worse. Therefore, time slice Egalitarianism rules out the possibility of changing places Egalitarianism. This may be an advantage of time slice Egalitarianism over lifetime Egalitarianism. However, not surprisingly, time slice Egalitarianism is insensitive to the inequality between lifetime well-beings. Even if there has been a long and extreme inequality in the past, time slice egalitarianism will not compensate for past inequality by switching the relative position of the worse off and better off: any attempt to compensate for past inequality makes the outcome worse. At this stage, this feature of time slice Egalitarianism is neither an advantage nor a disadvantage, because time slice Egalitarianism is supposed to be unconcerned with lifetime inequality. I shall return to this issue in section 4.

It is important to note that, in time slice Egalitarianism, the goodness of a distribution at each period is determined without referring to distributions at other periods. The goodness of an alternative is then determined by aggregating the goodness of the distribution-at-a-time across time. This verifies that time slice egalitarianism implies separability of time. Given that Telic Egalitarianism is relational, it violates strong separability in judging the goodness of the distribution-at-a-time. However, time slice Egalitarianism satisfies separability of time in judging the goodness of alternatives.

6.3.2   Time slice Prioritarianism

Let us turn now to time slice Prioritarianism. Like time slice Egalitarianism, time slice Prioritarianism will take the two-step aggregation process. At the first step, it determines the goodness of a distribution at each temporal stage in such a way that the well-being of a worse off person is given more weight than that of a better off person. At the second step, it aggregates the goodness of the distribution-at-a-time across time.

In chapter 2, I defined Prioritarianism by two conditions, i.e. strong separability and the Pigou-Dalton condition. These conditions apply to the first stage of the aggregation process. The goodness of a distribution-at-a-time is given by the sum of a strictly concave function of individual well-being at each period. The goodness of the distribution at T1, G^1, is given by $G^1 = f(w_1^1) + f(w_2^1)$. Likewise, the goodness of the distribution at T2, G^2, is given by $G^2 = f(w_1^2) + f(w_2^2)$. Then, the overall goodness of an alternative is given by the sum of goodness of the distribution-at-a-time, i.e. $G = G^1 + G^2 = f(w_1^1) + f(w_2^1) + f(w_1^2) + f(w_2^2)$.

> **Time slice Prioritarianism:** alternative $x = (w_1^1, w_2^1, w_1^2, w_2^2)$ is better than $y = (\bar{w}_1^1, \bar{w}_2^1, \bar{w}_1^2, \bar{w}_2^2)$ if and only if $f(w_1^1) + f(w_2^1) + f(w_1^2) + f(w_2^2) > f(\bar{w}_1^1) + f(\bar{w}_2^1) + f(\bar{w}_1^2) + f(\bar{w}_2^2)$, where $f(\ )$ is a strictly concave function.

Let us consider a special case, where the Prioritarian goodness function is a square-root function. Compare again alternatives A and B. In alternative A, the goodness of a distribution is $\sqrt{16} + \sqrt{4} = 6$ at T1, and $\sqrt{4} + \sqrt{16} = 6$ at T2. Therefore, the overall goodness of alternative A is 12. In alternative B, the goodness of a distribution is $\sqrt{10} + \sqrt{10} = 6.32$ at T1 and T2 respectively. The overall goodness of alternative B is 12.64. Therefore, time

slice Prioritarianism judges that alternative B is better than alternative A, (whereas lifetime Prioritarianism judges that alternative A is equally as good as alternative B).[11] Thus, time slice Prioritarianism certainly registers the fact that the well-beings of person 2 at T1 and person 1 at T2 are at a lower absolute level. Given that Prioritarianism is concerned with giving more weight to well-being at a lower absolute level, many Prioritarians would support time slice Prioritarianism rather than lifetime Prioritarianism.

It should be noticed that the goodness of a distribution at each period is determined independently of distributions at other periods just like time slice Egalitarianism. The goodness of a distribution at each period is determined without referring to distributions at other stages, and then the overall goodness of alternative is determined by adding up the goodness of a distribution-at-a-time. This shows that time slice Prioritarianism satisfies separability of time.

6.3.3 Comparison

In chapter 2, I argued that the non-relationality of Prioritarianism is best captured by the notion of strong separability. In this chapter, the idea of strong separability applies to the distribution at-a-time. Strong separability claims that the goodness of each person's well-being is determined independently of other people's well-beings. In this chapter, I have discussed whether or not the time slice Prioritarianism implies separability of time. Separability of time claims that the goodness of a distribution-at-a-time is determined independently of distributions at other temporal stages. It should be noticed that separability and separability of time together reduce each person at each time to a mere *location* of well-being. Look at my formula of time slice Prioritarianism. The goodness of an alternative is given by $G = G^1 + G^2 = f(w_1^1) + f(w_2^1) + f(w_1^2) + f(w_2^2)$. The goodness of person 1's well-being at T1 is determined independently of person 1's well-being at T2 or person 2's well-being at T1 and T2. This means that, even if we change the location of each well-being at each time to a different location in the matrix, the goodness of the alternative remains the same. Even if we

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[11]For example, take Leximin, which gives absolute priority to a worse off person. Leximin judges that Alternative B is better than alternative A, because the well-being of the worst off in alternative A (i.e. 4 units for person 2 at T1 and 4 units for person 1 at T2) is lower than the well-being of any person at any time in alternative B.

permutate one person's well-being at a time and his well-being at another time, or even if we permutate one person's well-being at a time and another person's well-being at another time, the goodness of the alternative remains the same. According to time slice Prioritarianism, if an alternative contains two well-beings of 16 units and two well-beings of 4 units, the goodness of those alternatives is the same.

On the other hand, time slice Egalitarianism satisfies separability of time but not strong separability of well-beings at each period. The goodness of person 1's well-being at T1 is affected by the relative level of person 2's well-being at T1. But it is independent of person 1's well-being at T2 or person 2's well-being at T2. Likewise, the goodness of person 1's well-being at T2 is affected by the relative level of person 2's well-being at T2, but independent of person 1's well-being at T1 or person 2's well-being at T2. The chief difference between the two principles is that, according to time slice Egalitarianism, the goodness of each person's well-being at a period is affected by the relative level of other people's well-being at the same period, whereas according to time slice Prioritarianism it is not affected. This difference emerges because Telic Egalitarianism violates strong separability whereas Prioritarianism satisfies it. The gist of the difference is illustrated in the following example.

	T1	T2			T1	T2			T1	T2
1	16	4		1	16	4		1	10	10
2	4	16		2	16	4		2	10	10
	Alternative A				Alternative E				Alternative B	

time slice Egalitarianism A $\prec$ E $\sim$ B.

time slice Prioritarianism A $\sim$ E $\prec$ B.

First, let us consider time slice Egalitarianism. According to time slice Egalitarianism, alternative A is worse than alternative E, because there are inequalities at both T1 and T2 in alternative A, whereas there is no inequality at either T1 or T2 in alternative B. As there is no temporal inequality in alternative E, there is no negative factor in determining the goodness of the distribution at each period. So the overall goodness of alternative E is 40. The overall goodness of alternative B is also 40, because there is no temporal inequality at T1 or T2. So, according to time slice

Egalitarianism, alternative E is equally as good as alternative B. In sum, time slice Egalitarianism judges that A $\prec$ E $\sim$ B ($\prec$ means that the right side is strictly better than the left side, and $\sim$ means that the right side is equally as good as the left side).

Next, consider time slice Prioritarianism. According to time slice Prioritarianism, alternative A is equally as good as alternative B, because two well-beings (i.e. person 2 at T1 and person 1 at T2 in alternative A, and persons 1 and 2 at T2 in alternative E) are at the level of 4 and the other two well-beings are at the level of 16. Comparing alternatives E and B, time slice Prioritarianism judges that alternative B is better than alternative E. This is because two well-beings are at 4 and the other two are at 16 in alternative E, whereas all well-beings are at 10 in alternative B. Time slice Prioritarianism holds that 6 units of gain for the worse off is more important than 6 units of loss for the better off. So it judges that alternative B is better than alternative E. In sum, time slice Prioritarianism judges that A $\sim$ E $\prec$ B.

In this comparison, Prioritarians might claim that time slice Prioritarianism is more acceptable than time slice Egalitarianism. Why? It may be claimed that the difference between alternatives A and E is trivial, and that there is no plausible reason to judge alternative A to be better than alternative E: because each person has the exactly same low level of well-being anyway, it does not matter whether persons 1 and 2 have that low level of well-being together at the same time. But time slice Egalitarianism claims that it is better for those two people to endure a low level of well-being together at the same time and to enjoy the high level of well-being together at the same time. Time slice Egalitarianism implies that it is better that people endure (or enjoy) the low (or high) level of well-being *simultaneously*.[12]

It may be further argued that there is a good reason to judge alternative B to be better than alternative E: even if there is no temporal inequality in both E and B, it might be claimed that alternative E is equally as good as alternative B. This is because persons 1 and 2 are at a lower absolute level in alternative E (even if 4 is above the threshold level of well-being), whereas no person is at that low level in alternative B. Time slice Prioritarianism gives a satisfying response to this worry: it judges that alternative A is equally as good as alternative E and that alternative B is better than alternative

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[12] A similar point is made by McKerlie (2000, pp. 279-80).

E. Thus, it may be claimed that time slice Prioritarianism is more plausible than time slice Egalitarianism.

Given (a) from the discussion in section 2 that the complete lives view in general is not plausible if temporal inequality is a relevant consideration, and (b) that some people might claim that time slice Prioritarianism is more acceptable than time slice Egalitarianism, one might be tempted to conclude that time slice Prioritarianism is the most acceptable candidate amongst intertemporal distributive principles. I disagree. In what follows, I argue that the time slice view is, in general, implausible, and, therefore, that time slice Prioritarianism is also implausible.

6.4 Criticism of the time slice view

In formulating the time slice view, I have emphasized that the goodness of a distribution at a period is determined independently of distributions at other periods, and that the goodness of each temporal stage is aggregated to the overall goodness of an alternative. But I think that this two-step argument is implausible. More specifically, I think it is implausible to determine the goodness of a distribution at a time independently of distributions at other times. That is, separability of time is implausible. Therefore, I think that the time slice view, be it Telic Egalitarian or Prioritarian, is implausible. In this section I explain why.

As discussed in the previous section, the time slice view implies separability of time. Separability of time is a formal condition on the betterness ordering defined on alternatives, which includes distributions at different periods. In economics, many people accept this condition. For example, Mirrlees (1982) and Strotz (1955-6) accept it. But they accept it without substantive moral argument. Some economists, for example Deaton and Muellbauer (1980, pp. 124-5), have reservations about accepting separability of time. John Broome (1991, ch. 11) offers some possible arguments in support of separability of time. However, his argument for separability of time is inconclusive. I think that separability of time is implausible in the context of distributive judgement, and that the goodness of a distribution at a period depends on distributions at other periods.

Consider alternative A again. In time slice Egalitarianism, I first calculated the goodness of the distribution at T1, i.e. $16 + 4 - 1/2(16 - 4) = 14$,

and the goodness of the distribution at T2, i.e. 14. I, then, added the goodness of distributions at T1 and T2, i.e. 28. Similarly, in time slice Prioritarianism, I calculated the good at T1, i.e. $f(16) + f(4)$ and the good at T2, $f(4) + f(16)$. And then the overall good of alternative A is said to be $2f(16) + 2f(4)$. In this process, I calculated the goodness at T1 independently of T2. Similarly, I calculated the goodness of T2 independently of T1. But this is implausible. Compare alternatives A and F.

	T1	T2			T1	T2
1	16	4		1	16	16
2	4	16		2	4	4
Alternative A				Alternative F		

Both time slice Egalitarianism and time slice Prioritarianism judge that alternative A is equally as good as alternative F. However, I think that many people believe such a judgement to be implausible. They would judge that we should choose alternative A rather than alternative F, because person 2 endures a low level of well-being throughout his life and person 1 enjoys a high level of well-being throughout his life. Consequently, person 1's life is always better off than person 2. On the other hand, in alternative A, both persons 1 and 2 endure the same low level of well-being, and enjoy the high level of well-being equally. The time slice view, be it Egalitarian or Prioritarian, judges that alternative A is equally as good as alternative F. But this is implausible. The source of this implausible judgment of the time slice view seems to be that there is some interaction between the distributions at T1 and T2, whenever we believe that alternative A is better than alternative F.[13]

There seem to be two arguments against the judgement that alternative A is equally as good as alternative F. Firstly, some Egalitarians may say that, although the goodness of alternative A is the same as the goodness of

[13]Although this dissertation does not consider Prioritarianism for prospects, this example may be used as a criticism of Rabinowicz's (2002) version of Prioritarianism, if alternatives A and F are interpreted as equi-probable uncertain prospects. Suppose that T1 and T2 in alternatives A and F are equi-probable states of nature. Rabinowicz's version of Prioritarianism for prospects first estimates the goodness of each state of nature and then proceeds to estimate the overall goodness of a prospect. On this version, prospect A is equally as good as prospect F. But this is counterintuitive. On the other hand, Broome's (1991) version of Prioritarianism for prospects judges that prospect A is strictly better than prospect F, and, in turn, delivers intuitively more plausible result.

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alternative F in light of the time slice view, there is an inequality between the lifetime well-beings of persons 1 and 2, and this lifetime inequality tips the balance towards alternative A. They may claim that both temporal inequality and lifetime inequality are relevant in judging the goodness of alternatives. Let us call Egalitarianism of this kind *hybrid Egalitarianism*, because it may be formulated in such a way that the badness of temporal inequality and lifetime inequality are considered to determine the overall goodness of alternatives. Hybrid Egalitarianism is briefly mentioned by McKerlie, who writes,

> One possibility is that we care about equality between complete lives, but we also accept some principle that gives weight to inequalities between parts of lives. Faced with a choice about whether to compensate for past inequality, we would have to balance the gain in equality between complete lives against the loss in terms of equality between parts of lives. In some examples we might think that one consideration was stronger, in different examples the other consideration.[14]

But McKerlie does not develop an Egalitarian position of this kind. I shall formulate it in section 6.

Secondly, many people (even if they are not Egalitarian) may claim that alternative F is *unfair* to person 2, and that we should choose alternative A because alternative A is due to this unfairness. In alternative F, person 2 is deprived of having 16 units of well-being throughout his life. On the other hand, in alternative A, each person is not deprived of a high level of well-being. In this dissertation, I am assuming that people are equally deserving. Given this assumption, there is no reason whatsoever to deprive one person of having a high level of well-being throughout his life. Thus, alternative A is *fairer* than alternative F. In alternative F, there is unfairness done to person 2. In alternative A, there is no unfairness done to any person. Unfairness done to person 2 tips the balance in favour of alternative A. Let us call this thought the *unfairness view*.

There may be two interpretations of the unfairness view.[15] The first is to think that unfairness cannot be reduced into *badness* for person 2, and

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[14] McKerlie (1989, p. 484).

[15] These two interpretations of unfairness will be discussed further in chapter 7, though in a slightly different context.

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that the unfair alternative ought to be excluded from a set of choosable alternatives. According to this interpretation, alternative F is unfair, and it ought not to be chosen. Unfairness is not the matter of good or bad. Therefore, we cannot say that alternative A is better than alternative F, but that alternative F ought not to be chosen. In this interpretation, unfairness works as a side-constraint on the set of choosable alternatives.

The other interpretation claims that alternative A is better than alternative F, because unfairness done to person 2 in alternative F is a bad to person 2. In this interpretation, unfairness is reduced into the bad of person who is affected by unfairness, and the badness of unfairness decreases the goodness of that alternative. So, the goodness of alternative A is greater than that of E. This interpretation is similar to hybrid Egalitarianism. The difference is that the badness, which tips the balance in favour of alternative A, is the lifetime inequality in hybrid Egalitarianism and the unfairness in this interpretation. Although I shall say nothing about which interpretation is more plausible, I shall formulate these two positions with the same formula in section 6. There may be some semantic differences between the two positions, but there seems to be no structural difference in their formalization.

Whichever interpretation one maintains, the judgement that alternative A is equally as good as alternative F seems implausible. This is because we think that there is an interaction between distributions at T1 and T2. The absence of interaction between distributions at T1 and T2 is due to separability of time. Separability of time is the source of this implausible judgement. Therefore, if alternative A is better than alternative F, this implies that separability of time is implausible. I think that alternative A is better than alternative F. This is why I think separability of time to be implausible. Thus, I think that the time slice view, be it Egalitarian or Prioritarian, is implausible.

However, some Prioritarians, if not all, may not think that alternative A is better than alternative F. They may find nothing implausible in the judgement that alternative A is equally as good as alternative F. In the next section, I examine this kind of argument for separability of time, but reject it.

6.5 Does the choice of unit depend on metaphysical theory?

Prioritarianism is unconcerned with the relationship between different people's well-beings. All Prioritarians care about is the absolute level of individual well-being. Time slice Prioritarians care about neither who endures a low level of well-being nor at which temporal stage someone endures a low level of well-being. They claim that it does not matter who endures a low level of well-being at T1 or T2. They claim that alternative A is equally as good as alternative F, whereas I have claimed that alternative A is better than F: they may disagree with me.

In section 3, I argued that separability of time implies that the unity of well-being of different temporal periods, or who bears how much well-being across time, does not matter. Those who claim that well-beings at different periods are not united within a single person in a significant way may seek support from a reductionist account of personal identity in metaphysics. I shall argue that the theory of personal identity, be it reductionist or not, affects neither the discussion of distributive judgement in general nor the judgement of the relative goodness of alternatives A and F more particularly: distributive judgements are not dependent on any particular theory of personal identity.

Reductionist accounts of personal identity claims roughly the following. When we discuss the continuity of person across time, what really matters is not personal identity *per se*, for example bodily continuity. According to reductionist accounts of personal identity, what matters rationally and morally is the continuity of a person's psychological experiences such as pleasure, pain, desire, thought, intention and so on. These psychological experiences, however, fade as time goes by. The pain that Jones experienced in the past is not as vivid as the one that Jones is experiencing at present. Maybe the pain that another person, say Tom, is experiencing at present is as vivid as the one that Jones is experiencing at present. Or maybe the pain that Tom is experiencing at present is more vivid for Jones than the one that Jones himself experienced many years ago. Likewise, the pain that Tom is experiencing at present is more vivid for Jones than the one that Jones himself will experience in future. Consequently, the pain that Tom, or someone else, is experiencing at present is more vivid for Jones than

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the one that Jones himself experienced in the past or will experience in future. Similarly, a person's desires and will change gradually, or sometimes suddenly, over time. This suggests that the person's psychological experience in the past or future is not more important than the psychological experience that other people are experiencing at present. Reductionism then holds that the connection between a person's psychological states across time is weakly connected, and that it is not more important than the connection between his psychological state at a time and other people's psychological state at the same time.

Those reductionists may apply their own metaphysical claim to moral theory and distributive judgments across time, or, conversely, the advocates of the time slice view may seek support from the reductionist account of personal identity. If the reductionist account of personal identity is correct, it might follow that alternatives A and F are equally good, and that my case against the time slice view in general and separability of time in particular might not be persuasive. In alternative F, person 1 enjoys a higher level of well-being throughout, whereas person 2 endures a lower level of well-being throughout. However, by appealing to the reductionist account of personal identity, it may be argued that it is not rationally and morally relevant whether the same person enjoys a high level of well-being or endures a low level of well-being throughout. That is, it is not relevant that the person who endures the lower level of well-being at T1 happens to be the same person who endures the lower level of well-being at T2. Person 1 at T1 is very weakly connected with person 1 at T2. The relation between person 1 at T1 and person 1 at T2 is as strongly connected as the relation between person 1 at T1 and person 2 at T1 or T2. For reductionists, all that matters in the distributive judgement across time is the amount of well-being experienced by people in each alternative. Consequently, they may judge that alternatives A and F are equally good.

The time slice view, supported by the reductionist account of personal identity, may be correct. But this is the case only when the reductionist account of personal identity is successfully generalized within the context of the distribution of well-being. The time slice view is not successfully justified by simply appealing to a metaphysical theory or the reductionist theory of personal identity. The move from the reductionist account of personal identity to the time slice view must be justified by moral theory.

However, I believe that it is not an easy task. The support of the time slice Prioritarianism seems to be based on the strong generalization of the reductionist account of personal identity to a distributive principle.

I believe that the reductionist theory of person does not determine the theory of distributive judgement across time. The choice of distributive principle does not depend on the metaphysical theory of personal identity. This point was discussed by John Rawls. According to Rawls, a moral theory "is the study of how the basic notions of the right, the good, and moral worth may be arranged to form different moral structure", and "tries to identify the chief similarities and differences between these structures and to characterize the way in which they are related to our moral sensibilities and natural attitudes, and to determine the conditions they must satisfy if they are to play their expected role in human life".[16] He continues,

> the study of substantive moral conceptions and their relation o
> our moral sensibility has its own distinctive problems and subject
> matter that requires to be investigated for its own sake. At the
> same time, answers to such questions as the analysis of moral
> concepts, the existence of objective moral truth, and the nature
> of persons and personal identity, depend upon an understanding
> of these structures. Thus the problems of moral philosophy that
> tie in with the theory of meaning and epistemology, metaphysics
> and the philosophy of mind, must call upon moral theory.[17]

Rawls claims that moral theory is independent of metaphysical theory about personal identity, and that whether or not personal identity across time is relevant outwith the metaphysical theory should be justified by some moral theory. I agree with Rawls. Even if the claim of reductionism is true as regards the metaphysics of personal identity, it is not necessarily true in the present context, i.e. the distributive theory of well-being. For the sake of argument, let us suppose that the claim of reductionist account of personal identity is true in the discussion of metaphysics of personal identity. If so, there should be a moral argument, that serves as a bridge between the thought that personal identity across time does not matter in metaphysical argument, on the one hand, and the thought that personal identity does not

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[16]Rawls (1975, p. 286) Page references are to his *Collected Papers*.
[17]Rawls (1975, p. 287).

matter in distributive judgement, on the other.

I shall not argue either for or against the truth of the reductionist account of personal identity here. This dissertation is not about metaphysics. However, I shall discuss two issues here: firstly, whether focusing on psychological state yields an appropriate notion of well-being; and secondly, whether the well-being across time is *morally* weakly connected. The reductionist account of personal identity can be generalized to support time slice Prioritarianism only if two moral arguments are successfully justified: (a) the moral notion of well-being consists in experienced psychological states; and (b) the moral importance between well-beings of different temporal stages is weakly related. But I think it very difficult to justify these two arguments.

(a) may not be easily justified. There are many competing accounts of well-being. Psychological states such as pleasure, pain, or happiness, form the basis of one type of account of well-being. The objective list view also provides a credible account of well-being. A somewhat intermediate account of well-being is also credible. For example, Amartya Sen tirelessly argues that each person's capability to function is the most plausible concept of well-being. In order to justify time slice Prioritarianism, it must be showed that the experienced psychological state view gives the most plausible account of well-being. Otherwise, time slice Prioritarians cannot appeal to the reductionist account of personal identity, and time slice Prioritarianism and the reductionist account of personal identity imply one another.

Furthermore, it should be considered whether the plausible notion of well-being is the *experienced* psychological state. Suppose that your spouse is cheating on you, and that you do not know that fact. The fact that your spouse is cheating on you is surely bad for you, even if you do not experience any pain or sadness. I think that the *experienced* psychological state view is not the most plausible account of well-being when we consider the distributive principles.

Even if the most plausible account of well-being is the experienced psychological state view, there is a further important question: from the *moral* point of view, is the importance of experienced psychological states across time weakly related? Someone might say that, even if the psychological states across time are *empirically* weakly related, they also need to be closely *morally* related. True. We change desires, intentions, tastes, thoughts and so on, gradually (sometimes suddenly). However, I believe that it is closely

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related morally, when we consider the distributive principles. I should ask whether there is any reason to justify an alternative in which one person is always worse off than the other, when these two persons are equally deserving. My answer is "no". I provided two reasons in the last section. It may be unfair to person 2. It may be worse in terms of inequality of lifetime well-being. There are several reasons. However, I believe that there is no reason to morally justify an alternative in which one person is always worse off than the other, even if a person's experienced psychological states are actually weakly connected. I think that the attempt to justify time slice Prioritarianism appealing to the reductionist account of personal identity fails. We should reject the time slice view, including time slice Prioritarianism.

6.6   The hybrid view

What do we learn from these discussions? My claim is that any distributive principle, be it Egalitarianism or Prioritarianism, should consider both the distribution of well-being at each period and the distribution of lifetime well-being. In section 2, I claimed that the unit of distributive judgement should not be limited to the lifetime well-being. This is because many Egalitarians would regard inequality at a period as a relevant consideration. Similarly, Prioritarians would think that a low level of well-being at a period is *also* a relevant consideration. I did not claim that the distribution of lifetime well-being is irrelevant. I have also argued that the unit of distributive judgement should not be limited to the distribution of well-being at each temporal stage. This is because there should be an interaction between each person's well-being across times. But I did not intend to rule out the relevance of temporal inequality from the distributive judgement. My analysis above suggests that lifetime well-being should not be ruled out from our distributive judgement. This is why we should consider both the distribution at each period and the distribution of lifetime well-being. Call this view the *hybrid view*.

The hybrid version of Egalitarianism can be easily formulated, if we think either (a) that alternative A is better than alternative F because lifetime inequality is a bad for person 2, or (b) that alternative A is better than F because alternative F is unfair to person 2 and the unfairness is a bad owned by person 2. Let $|\mathbf{w}_i - \mathbf{w}_j|$, where $\mathbf{w}_i = w_i^1 + w_i^2$, be the size of badness done to person 2. Then, *hybrid Egalitarianism* can be stated as follows.

Hybrid Egalitarianism: $x = (w_1^1, w_1^2, w_2^1, w_2^2)$ is at least as good as $y = (\bar{w}_1^1, \bar{w}_1^2, \bar{w}_2^1, \bar{w}_2^2)$ if and only if $\mathbf{w}_1 + \mathbf{w}_2 - 1/2(|w_1^1 - w_2^1| + |w_1^2 - w_2^2|) - \beta|\mathbf{w}_1 - \mathbf{w}_2| \geq \bar{\mathbf{w}}_1 + \bar{\mathbf{w}}_2 - 1/2(|\bar{w}_1^1 - \bar{w}_2^1| + |\bar{w}_1^2 - \bar{w}_2^2|) - \beta|\bar{\mathbf{w}}_1 - \bar{\mathbf{w}}_2|$, where $\mathbf{w}_i = w_i^1 + w_i^2$ and β is some coefficient.

In hybrid Egalitarianism, the goodness of an alternative is given by

(total well-being) $-$ (temporal inequality) $-$ (lifetime inequality).

Hybrid Egalitarianism thus construed encompasses the badness of temporal inequality and the badness of lifetime inequality in the overall goodness of an alternative. I believe that this is the most plausible version of Egalitarianism in the intertemporal distributive judgement.

On the other hand, the hybrid version of Prioritarianism faces the difficulty. The difficulty is that Prioritarians must derive two different moral goodness from a person's well-being: the one from moral goodness of a person's well-being at each period; and the other from a person's lifetime well-being, which includes his well-being at each period as a proper component. Consider the first possible formula of *hybrid Prioritarianism*.

Hybrid Prioritarianism (formula 1): $x = (w_1^1, w_1^2, w_2^1, w_2^2)$ is at least as good as $y = (\bar{w}_1^1, \bar{w}_1^2, \bar{w}_2^1, \bar{w}_2^2)$ if and only if $g[f(w_1^1) + f(w_1^2)] + g[f(w_2^1) + f(w_2^2)] \geq g[f(\bar{w}_1^1) + f(\bar{w}_1^2)] + g[f(\bar{w}_2^1) + f(\bar{w}_2^2)]$, where $f(\ )$ and $g(\ )$ are some increasing, strictly concave functions.

According to formula 1, we first estimate the moral goodness of each person's well-being at each period, independently of other people's well-being at the same period or of his well-being at other period. We then aggregate the moral goodness of his well-being at each period across time, and establish the moral goodness of the lifetime moral goodness of well-being. The question arises: what is meant by the moral goodness of the lifetime moral goodness of well-being? It sounds odd to say that the moral goodness of the lifetime moral goodness diminishes as the absolute level of the moral goodness of well-being gets higher. What morally diminishes should be either the lifetime well-being or well-being at each period.[18]

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[18]McKerlie (1997, p. 295n) presumes that Prioritarianism be based on both the life-

Another formula of hybrid Prioritarianism faces the similar difficulty. Consider the following formula.

> **Hybrid Prioritarianism (formula 2):** $x = (w_1^1, w_1^2, w_2^1, w_2^2)$ is at least as good as $y = (\bar{w}_1^1, \bar{w}_1^2, \bar{w}_2^1, \bar{w}_2^2)$ if and only if $u([g(w_1^1) + g(w_1^2) + g(w_2^1) + g(w_2^2)], [h(\mathbf{w}_1) + h(\mathbf{w}_2)]) \geq u([g(\bar{w}_1^1) + g(\bar{w}_1^2) + g(\bar{w}_2^1) + g(\bar{w}_2^2)], [h(\bar{\mathbf{w}}_1) + h(\bar{\mathbf{w}}_2)])$, where $g(\ )$ and $h(\ )$ are some increasing, strictly concave functions, $u(\ )$ is some increasing function, and $\mathbf{w}_i = w_i^1 + w_i^2$.

According to formula 2, the different moral weight is given to the lifetime well-being and well-being at each period. This gives rise to the question again: given that a person's lifetime well-being includes his well-being at each period, why do we give the two moral weights to the same well-being at a period? It is hard to believe that a person's well-being at each period receives two different moral weights at the same time. At least, Prioritarianism, construed in formula 2, does not straightforwardly represent the original idea of Prioritarianism, namely that the moral goodness of a person's well-being diminishes as the absolute level of his well-being gets higher. This is some problem for Prioritarianism, but not a knock-down criticism against it.

I have argued that the temporal unit of distributive judgement should be both the lifetime well-being and the well-being at each stage. I examined whether the choice of temporal unit would give a positive reason to support Prioritarianism, be it the time slice view or the hybrid view. Then, I discussed it does not provide us with a reason to support Prioritarianism.

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time well-being and well-being at each period, and suggests hybrid Prioritarianism of this formula. He admits the difficulty I described here, but thinks that Prioritarians would be willing to bite the bullet.

Chapter 7

Aggregation and Numbers

7.1 Introduction

In chapter 5, I suggested that Prioritarians can avoid my criticisms if they
replace the Pigou-Dalton condition with Hammond equity, and adopt Lex-
imin. This is because Leximin does not require a moral scale of the goodness
of well-being. At the same time, I also pointed out that many people would
find Leximin to be too extreme, because Leximin claims that any small gain
in the well-being of the worse off person outweighs any total loss in the well-
being of the better off people, however many better off people there are.
In this respect, Leximin is less acceptable than Prioritarianism defined by
strong separability, Pareto and the Pigou-Dalton condition. However, in this
very same respect, Leximin will gain some support from a different camp.
The critics of interpersonal aggregation do not support Prioritarianism as
defined by strong separability, Pareto and the Pigou-Dalton condition. But
they would support Leximin because it rules out interpersonal aggregation
of well-being.

There is a bonus, however, for Prioritarians if they adopt Leximin. Lex-
imin only requires the ordinal measure of people's well-being, because Lex-
imin only compares the relative level of people's well-being and does not need
to estimate the total well-being of people. Prioritarianism and Weighted
Egalitarianism require the cardinal measure of people's well-being, which is
stronger than the ordinal measure. I am not sure whether the measure of
people's well-being tips the balance in favour of either distributive principle.
However, it might be a good news for non-aggregative Prioritarians.

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In this chapter, however, I argue against non-aggregative distributive principles in general. Recently, it has been argued that non-aggregative distributive principles are too extreme because the numbers do not count. I shall show that the numbers actually count in Leximin only when the claim of each person is of equal moral significance. So, in Leximin, the numbers count in some cases but not in other cases. Leximin can respond to the criticism against the non-aggregative distributive principles. However, I shall argue that the rejection of interpersonal aggregation fails.

Consider the choice between (a) saving one stranger's life and letting five different strangers die, and (b) saving five strangers' lives and letting another stranger die (call this *Rescue Case*). In his controversial paper, John Taurek (1977) argues that we should flip a fair coin in this situation, since flipping a coin gives each person an equal chance of being saved, and this best captures the moral claim that we should treat each person with equal concern and respect. By endorsing coin-tossing, he rejects the comparison between the combined good of five lives saved and the good of one life saved, thus ruling out interpersonal aggregation.

Taurek's argument is not controversial for those who favour interpersonal aggregation: there is no controversy but rather a disagreement. It is controversial for the critics of interpersonal aggregation who are supposed to share the objection to interpersonal aggregation with Taurek, yet may want to save five lives directly, not tossing a coin. If the goods/bads of different people are not allowed to be aggregated, how could they justify the case for saving the five in the Rescue Case? Does the rejection of interpersonal aggregation imply that we should toss a coin in the Rescue Case? Some critics of interpersonal aggregation want to give proper respect to each separate person but at the same time want to save the greater number in the Rescue Case. Let us call this problem the *Number Problem*.

There seem to be two ways to approach the Number Problem. The first approach, that of the critics of interpersonal aggregation, regards the rejection of interpersonal aggregation as a necessary way to give proper respect to each separate person, and they offer an argument for saving the greater number without appealing to interpersonal aggregation. Let us call this approach the *Non-Aggregation Approach*. This approach has recently been advocated by Frances Kamm and Thomas Scanlon.[1] The other approach,

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[1] Kamm (1993, pp. 101, 114-19) and Scanlon (1998, pp. 229-41).

based on interpersonal aggregation, does not necessarily violate the separateness of persons: interpersonal aggregation and the respect given to the separateness of persons are not in conflict. According to this approach, we can justify the case for the greater number with a proper respect for each separate person, but this does not rule out interpersonal aggregation. Let us call this approach the *Aggregation Approach*, which I shall defend in this chapter.

I defend the Aggregation Approach because it seems that we should save the greater number in some cases, and that we should toss a coin in other cases even if one group is strictly larger than the other: it is not the case that we should always save the greater number. And the Aggregation Approach best captures the rationale behind this judgement.

The chapter is organized as follows. Section 2 shows that two non-aggregative principles, Maximin and the pairwise comparison, do not support saving the greater number. Section 3 characterizes what is meant exactly by interpersonal aggregation, which many non-utilitarians wish to rule out. Section 4 discusses the consequentialist case for saving the greater number without appealing to interpersonal aggregation. Section 5 examines Scanlon's proposal in favour of saving the greater number. Section 6 raises the question of whether we should always save the greater number and discusses what I call the Converse Number Problem. Section 7 puts forward the Aggregation Approach, which solves both the Number Problem and Converse Number Problem by giving proper respect to each person concerned.

7.2 Do they account for the numbers?

Some philosophers think that we should reject interpersonal aggregation in order to give proper respect to each separate person. And they put forward non-aggregative principles. For example, as part of his two principles of justice, John Rawls (1971) proposes the Difference Principle, according to which social and economic inequality should be arranged so as to benefit the least advantaged group in terms of primary social goods. The Difference Principle does not aggregate the goods of different groups and, not surprisingly, it does not consider the numbers. To illustrate, suppose that there are two million people in the least advantaged group in a possible state x

and that there are a million people in the least advantaged group in another state y. If both groups are at the same level of primary social goods, the Difference Principle judges that x and y are equally good. It also implies that any small gain for the worst off group outweighs the greater losses for the non-worst off groups, however large the size of the non-worst off groups is. Thus, the numbers do not count on the Difference Principle.

Thomas Nagel also puts forward a non-aggregative distributive principle, which he calls the *pairwise comparison*: it compares one person's gain and loss with another's so to identify which alternative would be less unacceptable, and chooses the least unacceptable one from individual standpoints.

> Where there is conflict of interests, no result can be completely acceptable to everyone. But it is possible to assess each result from each point of view to try to find the one that is least unacceptable to the person to whom it is most unacceptable. This means that any other alternative will be more unacceptable to someone than this alternative is to anyone. The preferred alternative is in that sense the least unacceptable from each person's point of view separately. A radically egalitarian policy of giving absolute priority to the worst off, *regardless of numbers*, would result from always choosing the least unacceptable alternative, in this sense.[2]

The pairwise comparison compares each person's gain and loss with another's, and, through the series of pairwise comparisons, identifies the alternative which is least unacceptable to everyone. Given that the comparison is made between the gains and losses of two persons, it rules out the possibility that the combined gains of a group of different persons outweigh the combined losses of another group: the pairwise comparison is non-aggregative. Even if x is slightly better than y for a million people but if y is considerably better than x for one very badly off person, the pairwise comparison claims that y should be chosen. Nagel thus rules out interpersonal aggregation of gains and losses, and hence thinks the numbers irrelevant.

However, Nagel is fully aware that it may be problematic that the pairwise comparison does not consider the numbers as relevant:

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[2]Nagel (1979, p. 123). Emphasis added.

[i]t seems to me that no plausible theory can avoid the relevance of numbers completely. There may be some disparities of urgency so great that the priorities persist whatever numbers are involved. But if the choice between preventing severe hardship for some who are very poor and deprived, and preventing less severe but still struggling for subsistence, then it is very difficult for me to believe that the numbers do not count, and that priority of urgency goes to the worse off however many more there are of the better off."[3]

Yet, he does not propose a principle that can answer this problem.

Let us see what the non-aggregative principles of Rawls and Nagel would claim in the Rescue Case. Given that Rawls's Difference Principle is applied only to the basic social structure and to the representative individuals of groups, it should not be applied to the Rescue Case. But take Maximin, which underlies the Difference Principle. Maximin is concerned with the betterness relation of states of affairs. It claims that x is better than y if and only if the level of the worst off person in x is higher than that in y. Since someone dies whichever group we might save, Maximin judges that saving five lives is equally as good as saving one life. Maximin itself does not give any reason to support saving five lives. It would not disagree with tossing a coin, unless it is combined with some additional conditions.

Nagel's pairwise comparison does not give a positive reason for saving five lives, either. The gain and loss of each person is compared with another, and by continuing the pairwise comparisons for all pairs of six individuals concerned, it turns out that the gain and loss of each person is equally great. Therefore, saving five lives and saving one life are equally acceptable/unacceptable to each of them. Nagel's pairwise comparison therefore implies that saving five lives is equally acceptable as saving one life. Consequently, like Maximin, the pairwise comparison itself does not support saving five lives: it would not disagree with tossing a coin.[4]

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[3]Nagel (1979, p. 125). Nagel continues "if egalitarian urgency is itself sensitive to numbers in this way, it does not seem that any form of unanimity criterion could explain the foundation of the view." But, later, Nagel (1991, p.73) changes his stance. He states that "I am inclined toward a somewhat weaker preference for the worst off, which can be outweighed by sufficiently large benefit to sufficiently large numbers of those better off". See also Nagel (1981, pp. 197-98).

[4]This point was first made by Michael Otsuka (2000, pp. 290-91).

Thus, neither Maximin nor the pairwise comparison justifies the case for saving five lives. This invites the following question. Does respect for each separate person lead us to toss a coin in the Rescue Case? If we want to save the five, does this mean that we are appealing to interpersonal aggregation? The answer is "no". It is possible to justify the case for saving the greater number without interpersonal aggregation. In the later sections, I shall examine two proposals that take a Non-Aggregation Approach: the consequentialist proposal and Scanlon's argument. But before we begin to analyze the Non-Aggregation Approach to the Number Problem, we need to pin down what exactly the Non-Aggregation Approach wants to avoid.

7.3 Aggregation and consequentialism

I have so far used the term "interpersonal aggregation" without defining it precisely. Let me define it in order to clarify what Taurek and non-utilitarians exactly wish to avoid. Taurek says "[i]t is not my way to think of them [five strangers] as each having a certain *objective value*, determined however it is we determine the objective value of things, and then to make some estimate of the combined value of the five as against the one".[5] Here, he does not want to combine the losses of five individuals into an "objective value" and to balance the combined value of the five against the one. I shall follow Taurek's characterization of interpersonal aggregation. By interpersonal aggregation, I mean, roughly, the combination of separate people's goods, happiness, losses, well-beings, and so on, into an objective value. In what follows, I will provide a precise definition of aggregation in general and interpersonal aggregation in particular.

First, let us define aggregation in general. Aggregation combines the values of separate morally relevant features into a single value in order to determine a comparative relation between the sequences of these features. Suppose there are two sets: the one contains i features and the other contains j features. The relation between the two sequences is as follows.

Relation: $(a_1, a_2, ..., a_i)$ is at least as F as $(a'_1, a'_2, ..., a'_j)$,

where F is some property, e.g. good, great, strong, and so forth. F-relation is a strict relation which holds between two sequences, e.g. better, greater,

[5]Taurek (1977, p. 307). Emphasis added.

stronger, and so forth. For simplicity, let us assume that the F-relation is reflexive and transitive, and hence that the F-relation constitutes an (partial) F-ordering. The features in each set can be good, well-being, happiness, claims, loss, pain, or so on. Aggregation combines these separate features into a single value. This is best understood by introducing a real valued function, which is a numerical representation of an ordering. The relation of the two sequences is represented by an increasing function $f(\ )$, and this defines the notion of aggregation.

> **Aggregation**: $(a_1, a_2, ..., a_i)$ is at least as F as $(a'_1, a'_2, ..., a'_j)$, if and only if $f(a_1, a_2, ..., a_i) \geq f(a'_1, a'_2, ..., a'_j)$, where $f(\ )$ is strictly increasing in its arguments.

When the subscripted indices indicate persons, we have interpersonal aggregation. Thus, interpersonal aggregation is the combination of each person's morally relevant features (i.e. good, well-being, happiness, claims, loss, pain, and so on) into a real value in order to determine the relation of two sequences.

Function $f(\ )$ should be increasing in its function because, other things being equal, the increase of one feature should make the value of combined features strictly greater.

Take classical utilitarianism as an example. Classical utilitarianism is concerned with the betterness relation of states of affairs, i.e. it seeks to establish the relative goodness of states of affairs. Classical utilitarianism assumes that a state of affairs is a set of persons' happiness and that a state of affairs x is better than another y if and only if the sum of happiness in x is greater than that in y. So classical utilitarianism combines each separate person's happiness into a real value in order to establish the betterness relation between states of affairs. That is,

> **Classical utilitarianism**: $x = (w_1, w_2, ..., w_n)$ is at least as good as $y = (w'_1, w'_2, ..., w'_n)$ if and only if $f(x) = w_1 + w_2 + ... + w_n \geq f(y) = w'_1 + w'_2 + ... + w'_n$.

where w_i is a person's happiness.[6]

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[6]It should be noticed that adding-up is not the only way to combine the well-beings of different people. One example of non-additive interpersonal aggregation is what

It should be emphasized that, on the definition above, interpersonal aggregation does not entail consequentialism and that consequentialism does not entail interpersonal aggregation. Consequentialism determines the rightness/worngness of agent's action by the relative goodness, or betterness, of states of affairs: a state of affairs x is at least as good as y if and only if the good in x is at least as great as that in y. Some principles aggregate the goods of different people without appealing to the betterness of states of affairs. Some principle may, for example, aggregate the claims of different people and claim that we have a duty to respond to the stronger claim as a whole. This is not a theory about the betterness of states of affairs, yet it combines the claims of different people into an objective value.

Similarly, consequentialism does not entail interpersonal aggregation. Some consequentialist principles determine the betterness of states of affairs without combining separate goods into an objective value. But the good in a state of affairs can be specified without combining the good of separate people. For example, according to Maximin, the good of a state of affairs is the well-being level of the worst off person. It does not combine the good of separate people, yet it is still a principle that refers to the betterness of states of affairs.[7]

7.4 Consequentialist proposal

Given a clear distinction between interpersonal aggregation and consequentialism, there may not be any controversy even if someone wants to accept consequentialism without interpersonal aggregation: she might want to say

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economists call the Nash social welfare function, which is a product of individual well-being: that is, $x = (w_1, w_2, ..., w_n)$ is better than $y = (w_1', w_2', ..., w_n')$ if and only if $f(x) = w_1 \times w_2 \times ... \times w_n > f(y) = w_1' \times w_2' \times ... \times w_n'$. This formula certainly combines individual well-being into an objective value so to determine the relative goodness of states of affairs, but it is not additive.

[7] One might wonder whether Maximin is aggregative according to my characterization, since Maximin can be represented by a functional form, i.e. a state $x = (w_1, w_2, ..., w_n)$ is better than $y = (w_1', w_2', ..., w_n')$ if and only if $\min\{w_1, w_2, ..., w_n\} > \min\{w_1', w_2', ..., w_n'\}$. Certainly, the good of a distribution is represented by a real value. However, the Maximin function is not increasing in its arguments, and hence it does not satisfy the characterization above. The gist of my characterization is that interpersonal aggregation dissolves the goods of different people into an objective value: Maximin does not dissolve the goods of different people.

that one state of affairs is better than another state but without combining the goods of separate people. I think that consequentialists can justify the case for saving the greater number without combining the goods of separate people into an objective value. In what follows, I shall consider the *consequentialist proposal* for saving the greater number without interpersonal aggregation.[8]

Consequentialism requires only two non-aggregative conditions in order to show that saving more is better than saving fewer.

Symmetry : the permutations of personal identities do not change the goodness of state of affairs: e.g. $x = (10, 5)$ and $y = (5, 10)$ are equally good.

Pareto : if one state of affairs is better for some person than another state, and if it is worse for no persons, then it is better than the other.

Equipped only with these two non-aggregative conditions, I shall show that saving more is better than fewer. First, consider the choice between (1) saving A and letting B&C die and (2) saving B&C and letting A die. Now, compare three states of affairs, each of which show the states of A, B and C.

$x := (\text{saved, dead, dead})$

$y := (\text{dead, saved, dead})$

$z := (\text{dead, saved, saved}).$

What I need to show is that z is better than x. By Symmetry, x is equally as good as y. By Pareto, z is better than y. Consequently, z is better than x, as required. Thus, saving the two is better than saving one. By continuing the same process for comparisons between saving n persons and $n - 1$ persons, I conclude that saving more is always better than fewer. As neither Symmetry nor Pareto aggregates the goods of different people, consequentialism combined with Symmetry and Pareto supports saving the

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[8]The following argument is similar to what Frances Kamm calls the *Aggregation Argument* See Kamm (1993, pp. 85-87). However, as I shall show, it does not aggregate the good of separate people, and my formulation captures the basic structure of her argument neatly.

greater number without combining the goods of different people into an objective value.

Symmetry and Pareto are weak conditions, and many principles such as utilitarianism, Prioritarianism, Leximin, and so on, satisfy these two conditions. As shown, any principle satisfying both conditions judges that saving more is always better than saving fewer. Therefore, it is not surprising that some non-utilitarians agree with utilitarians that saving more is better than fewer.

Nonetheless, some principles do not satisfy either condition. Those principles do not necessarily claim that saving more is better than saving fewer. Take Maximin again. It satisfies Symmetry but does not satisfy Pareto. It judges that x and y are equally good, but that y is equally as good as z: consequently, it judges that x is equally as good as z. According to Maximin, there is no ground to support saving the greater number: it might agree with tossing a coin.

It is important, however, to note that the conjunction of Symmetry and Pareto fails to provide the definitive answer in a more complicated choice problem. Consider the "television studio example" of Thomas Scanlon, where we face a choice between (a) interfering with the enjoyment of a billion World Cup viewers in order to save Jones who suffers an accident in the transmitter room, and (b) letting Jones be in pain and waiting till the match is over.[9] In this example, the conjunction of Symmetry and Pareto does not tell whether we should save Jones or letting him be in pain for the sake of the amusement of a billion viewers. To consolidate goods of different strength, we need some stronger condition than Symmetry and Pareto. It is at this stage that some principles allow interpersonal aggregation, while others do not. Some people would adopt an aggregative formula, and would say that the combined goods of a million viewers outweigh the goodness of saving Jones. Even if the individual good is very small, the combined goods of a sufficiently large number of people may outweigh the good of one person. Needless to say, utilitarians adopt the aggregative formula at this stage. However, some others adopt a non-aggregative formula, like Leximin. In the television studio case, Leximin judges that saving Jones is better than letting a million viewers watch the match. So Leximin disagrees with utilitarianism in this example.

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[9]Scanlon (1998, p. 235).

Symmetry and Pareto are so weak that diverse principles satisfy them. Insofar as the good of each person has the same moral importance, Symmetry and Pareto tell us to save the greater number without combining the goods of different people into an objective value: the numbers count if the goods are equally weighty; but the numbers do not necessarily count if the goods differ from one another.

It is of great importance to call attention to the basic idea behind the consequentialist proposal, thus construed. Consider Pareto. It says that "if one state of affairs is better for some person than another state, and if it is worse for no persons, then it is better than the other". We can balance the indifferent peoples' states out, and the non-cancelled-out people's state tips the balance in favour of bringing about a state of affairs in which the greater number of people is saved. To see this, compare again y and z above. Pareto implies that we can balance the states of A and B out and focus only on the state of C. It is the state of C that tips the balance in favour of the judgement that z is better than y.

It is also important to emphasize that this consequentialist proposal claims that saving more is *always* better than saving fewer. This is exactly what the Non-Aggregation Approach aims at. The Number Problem motivates the search for a case for saving the greater number in such a way that the separateness of persons is respected. The Non-Aggregation Approach thinks that the rejection of interpersonal aggregation saves the separateness of persons. In the Rescue Case where we face a choice between saving five lives and saving one life, the Non-Aggregation Approach to the Number Problem seeks to justify the case for saving the greater number without interpersonal aggregation. The consequentialist proposal is successful in achieving this particular purpose.

7.5 A non-consequentialist proposal: Scanlon's argument

Recently, Thomas Scanlon has suggested a different argument for saving the greater number.[10] His argument is based on his contractualism, not on the betterness of states of affairs: Scanlon does not say that saving more is better than saving fewer.

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[10]Scanlon (1998, pp. 229-41). See also Kamm (1993, p. 101, pp. 114-19).

His contractualism maintains that an action is wrong if it is ruled out by principles that no one can reasonably reject from individual standpoints. According to Scanlon's contractualism, whether or not principles can be rejected depends only on the reasons from various individual standpoints. When there exists even one person who has a plausible reason to reject a principle, Scanlon argues, the same principle is not seen as a basis to judge the rightness and wrongness of an act, even if many people, however many, would have benefited from adopting such a principle. Scanlon's contractualism seems to reject any possibility of aggregating different people's claims.

However, Scanlon does not want to rule out the possibility that the numbers count, saying that "contractualism appears to go too far in the opposite direction, disallowing any appeal to aggregative benefits even in cases in which the right thing to do does seem to depend on the impact that various actions would have on particular individuals but also on the number of individuals who would be affected".[11] He wishes his contractualism to allow the numbers to count at least in some cases so long as it does not open the door to an implausible form of aggregation like the utilitarian one.

Scanlon then puts forward his own case for saving the greater number. He first considers a choice between (a) saving A and letting B&C die and (b) saving B&C and letting A die. His argument runs as follows. If there is only one person on each side, tossing a fair coin might be the principle which no one can reasonably reject from individual standpoints. But if the presence of C's claim makes no difference to how we are required to go about deciding what to do, this implies that C's claim to be saved would have no moral significance and hence that C is not shown a positive concern. Therefore, C can reasonably reject the principle of tossing a coin. This is all Scanlon says.

It should be noticed that Scanlon's argument is similar to the consequentialist proposal in structure.[12] In Scanlon's argument, A's and B's claims are balanced out, and C's claim provides the basis to reject the principle of tossing a coin, tipping the balance in favour of the principle of saving the greater number. The chief difference is (1) that Scanlon's argument is based on an individual *claim* whereas the consequentialist proposal is based on the betterness of states of affairs and (2) that Scanlon's argument sees C's

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[11]Scanlon (1998, p. 230).

[12]A more focused discussion on this point is appended to the end of this chapter.

claim as a basis to reject the *principle* of tossing a coin whereas the consequentialist proposal sees the betterness of C's states as a basis to judge the betterness of states of affairs. Even if there are these differences, Scanlon's argument is structurally similar to the consequentialist proposal and, from this, there is good reason to think that Scanlon's argument, like the consequentialist proposal, supports the case for saving the greater number without interpersonal aggregation.

However, someone might argue that Scanlon's argument implicitly relies on a type of interpersonal aggregation because C's claim rejects the principle of coin-tossing only when C's claim is presented together with B's claim. This point was recently made by Michael Otsuka, according to whom Scanlon's argument "considers C's claim *in combination with* B's claim so that they '   '' tip the balance in favour of saving B and C. So Scanlon's argument compares the claim of a group of individuals against the claim of one person".[13] As Scanlon's argument appeals to the claim of a group of individuals to be saved, Otsuka concludes that it relies on a type of interpersonal aggregation.

Surely, C's claim tips the balance in favour of saving the greater number only when C's claim is presented with B's claim against A's claim. So Otsuka is right to say that Scanlon's argument "considers C's claim *in combination with* B's claim". However, it is not clear if Scanlon's argument relies on interpersonal aggregation. Otsuka seems to imply that whenever someone's claim in combination with other people's claims tips the balance in favour of them, interpersonal aggregation takes place, even if their claims do not dissolve into an objective value. But I will argue that Scanlon's argument does not aggregate B's and C's claims or aggregate the claims of different people.[14]

In section 3 of this chapter, I suggested that consequentialism does not imply interpersonal aggregation and that interpersonal aggregation does not imply consequentialism. The same is true in the case of Scanlon's contractualism.

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[13] Otsuka (2000, p. 291). Original emphasis.

[14] One might think that the disagreement between Otsuka and me is nothing more than a difference in definition, i.e. Otsuka's understanding of interpersonal aggregation is broader than mine. Even if this is the case, it can still be said that my argument clarifies the implausible form of interpersonal aggregation that Scanlon and other non-utilitarians wish to avoid.

Assume that Scanlon's argument aggregates the claims of different people, and let us write C_i for person i's claim. Assume also that the strength of claims of a group can be represented by a real-valued function $g(\ )$, where the claim of i is stronger than the claim of j if and only if $g(C_i) > g(C_j)$. So the *combined* claim of B and C is stronger than the claim of A alone if and only if $g(C_B, C_C) > g(C_A)$. This is because it is natural to think that the function $g(\ )$ is increasing in the number of its arguments, and that it is not bounded above.

Now, consider the "television studio example" again. There are two cases. If Scanlon's argument aggregates the claims of different people as Otsuka claims, then there must be a sufficiently great number n such that $g(C_{Jones}) < g(C_1, C_2, ..., C_n)$, even if $g(C_{Jones}) > g(C_1, C_2, ..., C_{n-1})$. That is, there must be a sufficiently large number of people such that the combination of weaker claims of those people outweighs the stronger claim of Jones. Scanlon, however, does not allow such a combination of claims into an objective value. He does not need such combination in order to justify the case for saving the greater number. Just as in the case of the consequentialist proposal, as far as the claims of people are the same strength, Scanlon's argument can justify it by balancing A's and B's claims out and then by seeing C's remaining claim as a balance-tipping force. When the claims of people are different as in the television studio example, Scanlon's argument claims that, like Leximin, we should save Jones. This is because Scanlon's argument, like Leximin, does not allow interpersonal aggregation. Otsuka is right to say that Scanlon's argument considers C's claim in combination with B's claim. But this does not necessarily imply that Scanlon's argument relies on some sort of interpersonal aggregation. Scanlon's argument falls under the Non-Aggregation Approach to the Number Problem.[15]

Finally, it should be noted that, like the consequentialist proposal, Scanlon's argument always supports the principle of saving the greater number when there is an unbalanced-out claim. Because we give a positive concern to each person, the presence of an unbalanced-out claim in the larger group

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[15]This is just one possible interpretation of Scanlon's argument. It might be argued that the claim of Jones *silences* the claims of World Cup viewers. That is, the claims of World Cup viewers lose the reason-giving force when it meets with Jones's claim. But my point here is that, even if Scanlon does not appeal to the notion of silencing a certain claim-type, he can still hold that his case for saving the greater number does not rely on interpersonal aggregation.

provides a legitimate basis for rejecting the principle of tossing a coin. This is the case whenever the claims of people are equally weighty. Like the consequentialist proposal, Scanlon's argument maintains that we ought always to save the greater number.

7.6 Should the numbers always count?: the Converse Number Problem

I have examined two successful non-aggregative arguments in the Number Problem. Both the consequentialist proposal and Scanlon's argument maintain that we should *always* save the greater number. This is the case whenever the goods/claims of people are equally weighty. However, as I briefly mentioned in section 1, I believe that we should save the greater number in some cases, but that we should toss a coin in other cases even if one group is strictly larger than the other.

Consider the large scale Rescue Case, where we face a choice between (a′) saving 1000 lives and letting 1001 people die and (b′) saving 1001 lives and letting 1000 people die. The consequentialist proposal says that saving 1001 lives is better than saving 1000 lives. Scanlon's argument would say that, if we are to adopt the principle of tossing a coin, the additional person on the side of 1001 could reasonably reject a principle that favours 1001 lives. So both the consequentialist proposal and Scanlon's argument maintain that we should save 1001 lives. This is not surprising: the theoretical structure of these arguments, i.e. the balancing-out, allows them to support saving the greater number regardless of the size of the people concerned. But I believe that we should toss a coin in the large scale Rescue Case, even if it is the case that we should save the five rather than saving the one. If these two judgements are intuitively appealing, we need to provide a different argument to explain two seemingly conflicting judgements: that (1) we should save the greater number in some cases; and (2) we should toss a coin in other cases. On the face of it, the numbers count in the former judgement, whereas the numbers do *not* count in the latter judgement. I have called the Number Problem for the search of arguments for saving the greater number. Then, I shall search for an argument which justifies the case for tossing a coin. Let us call this problem the *Converse Number Problem*.

What is the idea behind the judgement that we should toss a coin in the

large scale Rescue Case? Frances Kamm offers a possible answer, though I disagree. She considers the large scale Rescue Case.

> Now suppose 1000 people are on one island and 1001 people are on another. Here, I believe, it may even be correct to ignore the difference of one life. If so, then in this context the one life has become an irrelevant utility.[16]

She continues,

> it is not only the (objective) significance of the additional loss to the person who will suffer it that counts. ... In addition, the size of the chance for life that is at stake for others and the number of others whose lives are at stake may make relevant or irrelevant an additional utility that is irrelevant or relevant in other context.[17]

Here, Kamm thinks it wrong to deprive 1000 people of their 50 percent chance to be saved simply in order to obtain the extra utility of saving one more person: an additional life in the group of 1001 is unimportant and negligible in the large scale Rescue Case, and it should not count. According to Kamm, it is an "irrelevant utility". She believes it right to toss a coin and to give each person an equal chance to be saved.[18]

Is an additional life saved in the larger group an irrelevant utility in the large scale Rescue Case? I think it a *relevant* utility. But it is outweighed by

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[16]Kamm (1993, p. 103).

[17]Kamm (1993, p. 103). Originally, her idea of an irrelevant utility is used as a possible criticism against the substitution of equivalents (which roughly corresponds to my Symmetry in the consequentialist proposal) in her Aggregation Argument.

[18]To understand Kamm's idea of an irrelevant utility, it may be helpful to look at another example Kamm discusses (Kamm 1993, pp. 101-102). Suppose a choice between saving A's life, on the one hand, and saving B's life and curing C's sore throat, on the other hand. Call this example the *Sore Throat Case*. Kamm thinks it wrong to deprive A of his 50 percent chance to be saved in order to get the additional utility of curing C's sore throat. She thinks that the additional utility of curing C's sore throat is an irrelevant utility. According to Kamm, it is right to toss a coin in the Sore Throat Case. As far as this example is concerned, Scanlon might share a similar view. He might claim that, faced with a claim to being saved, the claim that the sore throat be treated may lose its reason-giving force, or that the claim that the sore throat be treated is *silenced* by the claim to being saved. However, in the large scale Rescue Case, the claim of an additional person may never be silenced by other equally weight claims.

some other consideration. The good of an additional life saved is outweighed by the bad of something that is caused by saving 1001 lives directly. What is this "something" then? It is unfairness: unfairness done to 1000 people who are not saved. The next section presents my own argument for tossing a coin in the large scale Rescue Case, capitalizing on the notion of unfairness.

7.7 Taking unfairness seriously

First of all, let me introduce two accounts of unfairness: a strict account and a moderate account. In the Rescue Case, each person, regardless of which group he/she might belong to, has an equally strong claim to the good. The good is being saved. Each person is equally entitled to this good. So their claims should be satisfied equally. When their claims are not satisfied equally, it is unfair to those persons whose claim is not satisfied. If the good is divisible, we may divide it equally and distribute it to each person equally. This is perfectly fair. However, in the Rescue Case, the good is indivisible. When some people's claims are satisfied, other people's claims will not be satisfied. The only way to satisfy their claims equally is to save nobody. This is perfectly fair.[19]

The strict account of unfairness claims that, if an act or policy is unfair to someone, it ought to be ruled out, full stop. Unfairness ought to be ruled out regardless of how much of good would be obtained by allowing the unfairness. Thus, according to the strict account of unfairness, unfairness cannot be outweighed by any amount of good, obtained by allowing the unfairness. In the Rescue Case, it is unfair to save the people in the larger group and let the people in the smaller group die. As each of them has an equally strong claim to the good, their claims ought to be satisfied equally. As saving nobody is the only way to satisfy the equally strong claim equally, it is the only option, which is not ruled out by the strict account of unfairness. On the face of it, the coin-tossing seems a *fair device*. Yet, saving someone in the Rescue Case necessarily involves unfairness, because some people are left unsaved and this is an unequal satisfaction of equally strong claims. Thus, the strict account of fairness would demand that we save nobody.

On the other hand, the moderate account of unfairness allows a trade off between unfairness and other considerations. Like the strict notion of

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[19]For more detailed treatment of fairness in this line, see Broome (1990-1, pp. 87-102).

unfairness, the moderate notion of unfairness claims that it is unfair that some people are saved and others are not saved whenever they have an equally strong claim. If we save the people in the larger group, it is unfair to those in the smaller group. Even if we save the lives of either side by tossing a coin, it is still unfair to people who are not saved. However, saving no one seems stupid. It may be *better* to save someone than no one, even if doing so involves some unfairness. It is the moderate account of unfairness which warrants this move. On the moderate account, unfairness is not the only consideration. Other considerations such as the good of saving someone are also relevant. Even if saving someone in the Rescue Case includes unfairness, that unfairness may be outweighed by the good of saving someone. That is, the good of saving someone outweighs the bad of unfairness done to those people not saved. This implies that unfairness can be outweighed by a sufficient amount of good. What if unfairness is allowed to be outweighed by the good of saving someone? The least unfair thing to do is to give each person an equal chance to be saved, e.g. by tossing a coin. So, the moderate account may claim that we should toss a coin.[20]

The moderate account has a further implication. On this account, it is better to save someone than no one. It includes some unfairness. But the bad of some unfairness is outweighed by the good of saving someone. This implies that, as soon as we judge it better to save someone than no one, we are slipping into the domain where unfairness is reduced into a bad, which can be outweighed by a good. This opens the door to the possibility that the badness of unfairness can be outweighed by a sufficiently large amount of good, brought about by saving the greater number of people. We shall save someone because saving someone is good enough to outweigh some

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[20]It is not my contention that one account of unfairness is more plausible than the other in general. Whether one account is more plausible than the other depends on the context of moral judgement. Take racism, for example. If a university does not admit a student on the basis that he is from a certain ethnic group, it is unfair to that student. Many people believe that such racism ought to be eliminated however much benefit the university would gain by maintaining such a racist admission policy. In this context, unfairness may never be thought to be outweighed by any other consideration, and hence we may adopt the strict account of unfairness. But, in the Rescue Case, if we adopt the strict account, we would end up saving nobody and this seems to be implausible. We should save at least some people, even if it includes the unequal satisfaction of equally strong claims, which is unfair. Thus, in the particular context of the Rescue Case, it seems that the moderate account is more plausible than the strict account.

unfairness. Then, it might be said that saving more lives is even better and outweighs more unfairness: and saving the sufficiently large number of lives is good enough to outweigh unfairness after all.

Let us see how this moderate notion of unfairness works in the original Rescue Case. In the original Rescue Case, if we choose the least unfair device, i.e. the coin-tossing, we will save either one life or five lives. Therefore, the good of coin-tossing consists in the expected number of lives saved. As the probability of each possibility is 50 percent, the expected good of lives saved is three lives saved. On the other hand, if we choose to save the greater number, we will save five lives for sure. But this is unfair to one person, because he is deprived of the chance to be saved. However, if we directly saves five lives, unfairness is done to the person on the side of the one, and does not do any harm to five persons: it is not unfair to five persons to be saved, because their claims are satisfied. Unfairness is a negative factor, or one aspect of the bad, which is attributed to the persons whose claims are not satisfied. The bad of unfairness is determined by the people who are the victims of unfairness. Let us write u for the bad of unfairness done to one person.

Given that unfairness done to this person should be taken into account as a negative factor, we compare the goods of tossing a coin and of saving the greater number, i.e. (1) $\langle$three lives saved$\rangle$ and (2) $\langle$five lives saved$\rangle$ – $\langle u \rangle$. Now, the focal point is whether unfairness can be outweighed by the good of saving two additional lives. It is hard to determine the relative weight of unfairness and of the good of saving two additional lives, but the following can be claimed: we toss a coin if u is more important than the good of two lives saved; we directly save five lives if the good of two lives saved is more important than u. I think that the good of two lives saved is more important than the bad of unfairness done to one person. This is why I hold that we should save five lives.

Next, consider the large scale Rescue Case. If we toss a coin, the expected good is 1000 lives and half a life saved. On the other hand, if we save the greater number, we will save 1001 lives for sure. What about the bad of unfairness? The bad of unfairness, done to *each* person, is constant regardless of the size of people concerned. It is a matter of whether one person receives proper respect or not, and this has nothing to do with the number of people concerned. The bad of unfairness for each person is the

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same in both the original Rescue Case and the large scale Rescue Case. But the *overall* bad of unfairness is different in the two respective cases. Unfairness done to 1000 people is greater than than the unfairness done to one person. For simplicity, suppose that we can represent the overall bad of unfairness by the sum of unfairness done to each person. Let us denote u the unfairness done to each person. In the original Rescue Case, if we directly save five lives, unfairness is done to one person: so the bad of unfairness is u. In the large scale Rescue Case, if we directly save 1001 lives, unfairness is done to 1000 people: so the overall bad of unfairness is $u \times 1000$. Thus, the unfairness done to 1000 people is greater than the unfairness done to one person.[21]

After all, we compare (1) $\langle 1000$ and half lives saved$\rangle$ and (2) $\langle 1001$ lives saved$\rangle - \langle u \times 1000 \rangle$. Now, the issue here is whether the good of half a life saved is more important than the bad of unfairness done to each of 1000 people. We should toss a coin if $u \times 1000$ is more important than the good of half a life saved. Alternatively, we should save 1001 lives if the good of half a life saved is more important than $u \times 1000$. I think that the bad of unfairness, done to 1000 people, is more important than the good of half a life saved. This is why I believe that we should toss a coin in the large scale Rescue Case.

It should be noted that this argument involves interpersonal aggregation in two ways. Firstly, to measure the overall bad of unfairness, it aggregates the individual bad of unfairness into the overall bad of unfairness. I proposed that unfairness is a bad done to each person. To measure the overall bad of unfairness, my argument has aggregated each person's bad as a result of unfairness. In my argument, the overall bad of unfairness increases as the number of people to whom unfairness is allowed increases. Here, the numbers are taken into consideration.

Secondly, my argument aggregates the good of lives saved. We compare the overall bad of unfairness and the difference between the expected number of lives saved by tossing a coin and the number of lives saved for sure. In the original Rescue Case, for example, we compare the overall bad of unfairness

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[21]We can make the same argument without using the additive form. Suppose that the overall bad of unfairness is represented by a real valued, increasing function $h(\ )$. If we do not give proper respect to one person, the overall bad of unfairness is $h(u)$. On the other hand, if we do not give proper respect to 1000 people, the overall bad of unfairness is $h(\langle u \rangle_{\sharp u=1000})$. As we assume that the function $h(\ )$ is increasing, $h(\langle u \rangle_{\sharp u=1000}) > h(u)$.

and the good of two lives saved. Here, my argument explicitly demands the interpersonal aggregation in order to measure the good of two lives saved. As the difference increases between the expected number of lives saved by tossing a coin and the number of lives saved for sure, it is more likely that the good of the extra lives saved outweighs the bad of unfairness. Here, again, the numbers are taken into consideration.

Thus, in my argument, the numbers count in two ways. Firstly, when we measure the overall bad of unfairness: if the number of the smaller group gets larger, it works in favour of tossing a coin. Secondly, when we measure the good of extra lives saved: if the difference between two groups gets larger, it works in favor of saving the greater number.

My argument explicitly includes interpersonal aggregation. This is because it does not take the view that the rejection of interpersonal aggregation does not necessarily imply the proper respect to each person involved in the Rescue Case. Thus, my argument falls under the Aggregation Approach to the Number Problem. And this approach, I believe, consistently explains my case in the Rescue Case and large scale Rescue Case.

7.8 Concluding remarks

I have discussed several arguments that have been provoked by Taurek's seminal paper. Although there is a substantial difference, these arguments attempt to show *how* we should give a proper respect to each person in Taurek's example. Taurek believes that we should respect each person equally and separately, thus flipping a fair coin. Consequentialists maintain that the good of the additional life saved in the larger group should be given a positive respect, thus claiming that saving more is better than fewer. Scanlon argues that if we adopt the coin-tossing-procedure, the claim of the additional person in the larger group would not be respected: as the additional person in the larger group can reasonably reject that procedure, the principle of saving the greater number is one that nobody can reasonably reject. Finally, I have argued that unfairness is a failure to give equal respect to equally important claims, and that whether we should save the greater number or toss a coin depends on the balance between the badness of unfairness done to people not saved and the goodness of additional lives saved. All these arguments respect each person in one way or another. Given that the

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difference between these arguments rests on the different interpretations of what counts as giving respect to each person, it is not easy to determine which is the most plausible. However, my proposal sharply contrasts with other arguments at least in one respect. It does not claim that interpersonal aggregation entails a lack of respect for each person. Rather, interpersonal aggregation is useful for encompassing equal respect (or the lack of respect) to each person in the overall goodness of alternatives. Interpersonal aggregation is not problematic itself: the problem is how we use interpersonal aggregation for the sake of respecting separate people.

As I have shown, Leximin considers the relevance of the numbers in some cases. Therefore, Leximin is not subject to the criticism that it claims to toss a coin in the Rescue Case. However, its non-aggregative nature seems to be implausible, because it does not give a good answer to the large scale Rescue Case.

Prioritarians may adopt Leximin in order to avoid my criticisms. Leximin seems implausible in the sense that it rules out interpersonal aggregation. However, in the same sense, some critics of interpersonal aggregation would support Leximin. But, in this chapter, I argued that the rejection of interpersonal aggregation is not plausible, especially when we consider the large scale Rescue Case. Therefore, I think that Leximin is an implausible distributive principle after all. The following is now clear. Prioritarianism encounters my criticisms in chapter 5. In order to avoid my criticisms, Prioritarianism may adopt Leximin. But Leximin turns out to be implausible, too. This shows that my proposed Weighted Egalitarianism is more acceptable than Prioritarianism.

Appendix: Lexical dominance in reasons and values

I discussed the consequentialist proposal and Scanlon's argument separately. In this appendix, I shall point out the theoretical similarity between the two proposals.

According to Scanlon's contractualism:

> an act is wrong if its performance under the circumstances would be disallowed by any set of principles for the general regulation of behaviour that no one could reasonably reject as a basis for informed, unforced general agreement.[22]

Scanlon claims that the justifiability of a moral principle depends only on various individuals reasons for objecting to that principle and alternatives to it. Suppose that we are faced with a choice between

(a) saving A and letting B and C die

(b) saving B and C and letting A die

According to Scanlon, it is right to choose (b). On the other hand, if we are faced with a choice between

(a*) saving Jones from serious injury and inconveniencing a million World Cup viewers

(b*) letting a million World Cup viewers enjoy and letting Jones be in pain

According to Scanlon, it is right to choose (a*). I am neither for nor against Scanlon's contractualism. But I think we can reach the same conclusions without proceeding via contractualist argument. I think we can reach the same conclusions by appealing directly to the reasons why the relevant principles could or could not be rejected, thereby explaining in a more direct way why we should do what Scanlon tells us to do. The main idea here is that some reason types (or value types) lexically dominate other reason types (or value types) in terms of normative force.

A plausible explanation of why a million World Cup viewers could not reasonably reject a principle which requires us to save Jones would be that

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[22]Scanlon (1997, p. 153).

the reason we have for saving Jones is of a significantly different type than the type of reason we have for not inconveniencing a single person in the group of a million people. Here is my proposed analysis of this structure: (Let m and p be reason tokens of type M and P, respectively.)

> **Lexical Dominance**: if M reasons lexically dominate P reasons in terms of normative force, then for any two incompatible options supported by either M reasons or P reasons (and no other type of reason)
>
> **(1)** if there is at least one m supporting an option, then we ought to choose the option that is supported by the greater number of m's; and
>
> **(2)** if the number of m's supporting each option is the same, then we ought to choose the option that is supported by the greater total number of p's.

By appealing to the idea that some reason types lexically dominate other reason types we can explain why the numbers count only sometimes. Let us suppose that considerations of serious harm provide us with reasons of a type which is such that it (the type of reason) lexically dominates reasons of the type provided by considerations of inconveniencing people. If this is the case then, in the first example, the fact that A would be saved by our doing (a) gives us a reason to do (a). The fact that B would be saved by our doing (b) gives us a reason to do (b), and the fact that C would be saved by our doing (b) gives us another reason to do (b). Since these reasons are all of the same type, what we ought to do is to choose the option which is supported by the greater number of reason tokens, i.e. (b). This is because, according to lexical dominance, if the relevant reason tokens are all of the same type, then we ought to choose the option that is supported by the largest number of reason tokens, i.e. (b). So the first example is a situation in which the numbers count.

In the second example, the reason we have for saving a person from serious injury is of a different type than the reasons we have for allowing a million people to enjoy. Again, if we suppose that the reason we have for saving a person from serious injury is of a type that lexically dominates the type of reason we have for allowing a million people to enjoy, then the fact

that Jones would be relieved of his pain by our doing (a*) gives us a reason to do (a*). The fact that World Cup viewer one would be able to enjoy the match by our doing (b*) is a reason to do (b*); the fact that World Cup viewer two would be able to enjoy the match by our doing (b*) is another reason for doing (b*) and so on. Viewed this way, if there are a million World Cup viewers, we have a million reasons for doing (b*). However, according to lexical dominance, we ought to do (a*). If reasons of the former type lexically dominate reasons of the latter type, then we should indeed save the single person from serious injury, regardless of how many World Cup viewers will be inconvenienced. So the second example is a situation in which the numbers do not count with regards to determining what we ought to do. Again, Scanlon could appeal to lexical dominance as the explanation for why Jones could reasonably reject a principle which required us to not to inconvenience a very large number of World Cup viewers.

Whether or not the lexical dominance of some reason types over other reason types captures Scanlon's thinking in the examples above, it picks out not only a possible explanation of the theoretical structure underlying his contractualism, but it also provides, in its own right, an intuitively attractive way of understanding how considerations of the numbers are relevant in different cases. I take this to be an attractive feature of the proposal. Furthermore, since the proposal can explain why we ought to choose the options Scanlon says we ought to choose without appealing to the more complicated argument he puts forward, my proposal has the virtue of being relatively simple.

Another advantage of my proposal is that it can be accepted by both those who take reasons to be the most basic normative concepts and those who take a similar view about value(s) (or the good). Scanlon takes the idea of a reason as primitive. For him, the notion of a reason is the most basic normative entity. However, he does not deny that there is a correlation between reasons and values. He says:

> being valuable is not a property that provides us with reasons.
> Rather, to call something valuable is to say that it has other
> properties that provide reasons for behaving in certain ways with
> regard to it.[23]

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[23]Scanlon (1997, p.96).

This view has become known as the *buck-passing account of value*. Some philosophers disagree with this. According to those who do, it is the positive value of an object, action, or state of affairs that provides us with reasons to behave in certain ways with regard to it. I have no argument for or against either view here. However, regardless of whether we endorse a value-based or a reason-based theory of ethics (or practical reason), the idea of lexical dominance is compatible with either view. The basic idea of lexical dominance can be applied to a value-based theory as well. Scanlon says he wants to avoid the counterintuitive implications of various implausible forms of aggregation such as utilitarianism. By introducing the idea of a lexical ordering of reason types, we can certainly avoid these implications. However, it is certainly possible to retain the idea that values are the fundamental normative element of ethics and/or practical reason, while endorsing the view that some value types lexically dominate other value types.[24]

A slightly modified, value-based version of our proposal would run as follows:

> **Lexical Dominance (V)**: if M values are discontinuously more valuable than P values, then for any two incompatible options to which either M values or P values attach (and to which no other type of value attaches)
>
> **(1)** if there is at least one m value attached to an option, then we ought to choose the option that has the greater number of m values attached to it; and
>
> **(2)** if the number of m values attached to each option is the same, then we ought to choose the option that has the greater total number of p values attached to it.

So my proposal here is, at least on the face of it, neutral between value-based and reason-based theories of ethics. However, if it can be shown that the structure of reasons differs from the structure of value(s) (or the good) — e.g. if some reason types are discontinuous with other reason types but all values (or value types) are continuous with each other (or vice versa), — then there may be reasons for preferring one model over the other. If, on the

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[24] J. S. Mill's distinction between higher and lower pleasures would be an example of this.

other hand, reasons and values have the same structure, then for all practical purposes it will not matter which model we appeal to in order to justify our actions. There may of course be deeper metaphysical, epistemological, or semantic reasons for saying that either reasons or value are more basic. But I have nothing to say about these issues.

By appealing to the idea that some reason types lexically dominate other reason types, we can explain why the numbers only count sometimes. The numbers count when and only when the relevant reason types allow it to. I have also said that this idea can be accepted by both reason-based and value-based theories of ethics and practical reason, provided that these theories allow not only for the existence of different reason types and value types but also for the existence of lexical orderings between these types. For these reasons, I think that the model I have presented here should be attractive to a wide variety of ethical theorists.

Conclusion

In the Introduction, I suggested that Egalitarianism has not been properly defined or understood. In this dissertation, I offered a proper definition and defence of a version of Egalitarianism. I argued that we should endorse Weighted Egalitarianism whenever equality is thought to be valuable amongst equally deserving people.

Parfit and his followers believe that the Levelling Down Objection illuminates the relative advantage of Prioritarianism over any versions of Telic Egalitarianism. However, as I showed, this is not the case. Weighted Egalitarianism meets the Levelling Down Objection. It also gives priority to the worse off, like Prioritarianism. The difference lies in what is meant by "the worse off". In Weighted Egalitarianism, a person is worse off in the sense that he is worse off than others. In Prioritarianism, a person is worse off in the sense that he is at a lower absolute level. Accordingly, Weighted Egalitarianism and Prioritarianism differ with regards to how to determine how much each person's well-being counts in the overall goodness of a distribution. In Weighted Egalitarianism, the weight is determined by the rank-order position of the person. In Prioritarianism, it is given by the absolute moral scale of the goodness of well-being independently of the distribution of people's well-being. This crucial difference is not properly captured in the literature. It is left obscure mainly because Parfit's paper was entitled "Equality or Priority?". This title gave us an impression that Telic Egalitarianism does not give priority to the worse off, whereas many people intuitively believe that we should give priority to the worse off. As the real difference between the two principles is left obscure, Prioritarians may not know exactly what kind of bullet they are supposed to bite. They must presuppose, or at least justify, the existence of the independent measure of the goodness of well-being. I believe it is hard to bite such bullet.

I have also suggested that Prioritarianism has a further bullet to bite, i.e. that they must accept Leximin. Leximin surely avoids my criticisms of Prioritarianism defined by strong separability and the Pigou-Dalton condition. However, it is extreme in the sense that it rules out the trade off between the well-being of a worse off person and the well-being of the better off people. Although Leximin would gain some support from the critics of interpersonal aggregation, I argued that the rejection of interpersonal aggregation is not acceptable. Although I did not claim that Prioritarianism is a hopeless distributive principle, my exposition, I hope, successfully showed that Weighted Egalitarianism is more acceptable than Prioritarianism or Leximin.

Some claims of Prioritarianism are intuitively appealing. It seems to me that many people are supporting Prioritarianism on the intuitive basis. I pointed out that Prioritarians must have an argument for the independent moral scale of the goodness of well-being, independently of distributions of people's well-being. I believe that this is not the easy task. Probably, Prioritarians may have a cake and eat it. They may claim that sociologist will find such absolute measure and moral scale for Prioritarians, or claim that we practically have the absolute measure, saying "Look at these homeless people! Do you still claim that there is no absolute measure of well-being?". In response to this, I can only say that I agree with such an intuition, but that I cannot see the plausible theoretical foundation for such a judgement.

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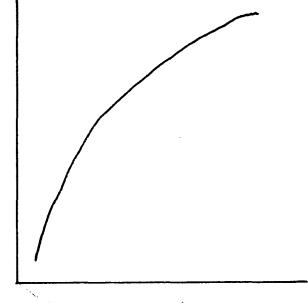[37] Kymlicka, W. (2002). *Contemporary Political Philosophy*, Second Edition, Oxford: Oxford University Press.

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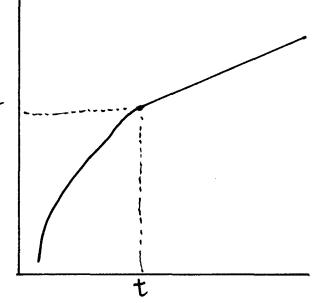
figure 1

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