

Working Paper No. 14/05

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Should more responsibility imply
less redistribution?**

by

**Alexander W. Cappelen
Bertil Tungodden**

SNF Project No. 2515
From circumstance to choice: Implications of the new genetics
for social justice and health policy

The project is financed by the Research Council of Norway

INSTITUTE FOR RESEARCH IN ECONOMICS AND BUSINESS ADMINISTRATION
BERGEN, DECEMBER 2005
ISSN 1503-2140

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Relocating the responsibility cut: Should more responsibility imply less redistribution?*

Alexander W. Cappelen[†] and Bertil Tungodden[‡]

December 8, 2005

Abstract

Liberal egalitarian theories of justice argue that inequalities arising from non-responsibility factors should be eliminated, but that inequalities arising from responsibility factors should be accepted. The paper discusses how the fairness argument for redistribution within a liberal egalitarian framework is affected by a relocation of the cut between responsibility and non-responsibility factors. The paper also discusses the claim that equalization of some non-responsibility factors will reduce the ideal level of redistribution.

1 Introduction

What should individuals be held responsible for? This question is at the heart of liberal egalitarian theories of justice. These theories make a fundamental distinction between factors that individuals should be held responsible for and factors that individuals should not be held responsible for, and they share the view that inequalities arising from responsibility factors should

*We should like to thank an anonymous referee, Søren Flinch Midtgaard, Jo Wolff, Peter Vallentyne and the participants in conferences in Stockholm and Lofoten for valuable comments. The usual disclaimer applies.

[†]The University of Oslo and the Norwegian School of Economics and Business Administration, Bergen, Norway. e-mail: alexander.cappelen@nhh.no.

[‡]Norwegian School of Economics and Business Administration and Chr. Michelsen Institute, Bergen, Norway. e-mail: bertil.tungodden@nhh.no.

be accepted, while inequalities arising from non-responsibility factors should be eliminated (see, among others, Dworkin (1981), Arneson (1989), Cohen (1989), Le Grand (1991), Roemer (1993, 1996, 1998), Bossert (1995), Fleurbaey (1994, 1995 a,b,c,d) and Bossert and Fleurbaey (1996)). They disagree, however, on where to draw the *responsibility cut*.

The location of the responsibility cut is essential in liberal egalitarian reasoning because it affects the ideal level of redistribution. This is most easily seen by noticing the implications of the liberal egalitarian framework in two extreme cases. No redistribution would be justifiable if all factors are responsibility factors, while, ideally, liberal egalitarians would aim at equalizing outcomes completely if all factors are non-responsibility factors. If there are both responsibility factors and non-responsibility factors, however, then the ideal level of redistribution also depends on the degree of inequality in the non-responsibility factors. For example, if there were no inequality in the non-responsibility factors, then there would be no reason to redistribute resources in a liberal egalitarian society.

In sum, in a liberal egalitarian society, the ideal distribution of income in any given situation depends both on the location of the responsibility cut and the level of inequality in non-responsibility factors. It may then seem reasonable to make the following two claims. First, the ideal level of redistribution is lower if people are held responsible for more factors. More responsibility should, in other words, imply less redistribution. Second, the ideal level of redistribution is lower if the differences in some non-responsibility factor are eliminated. More equality in one dimension of non-responsibility should, in other words, imply less redistribution.

The main result of this paper is that the first of these two claims does not hold in general. There will be situations in which increased responsibility results in the need for more redistribution (and equivalently less responsibility results in the need for less redistribution). The underlying intuition of this proposition is related to the less surprising result that the second claim also is false. After presenting the basic framework, where we introduce a formal way of modeling the relocation of the responsibility cut, we therefore start by establishing, in section 3, that there will be situations in which equalization of one dimension of non-responsibility increases the need for redistribution. In section 4, we then prove that the first claim is false, that is, that increased (reduced) responsibility does not necessarily result in the need for less (more) redistribution, and explain, using the insight from section 3, the intuition behind this. In the concluding section, we discuss how our analysis may shed

some light on the political debate on redistributive policy.

2 The basic framework

Consider a society with a population $N = \{1, \dots, n\}$, $n \geq 2$, where individual outcomes are determined by three types of factors. We shall refer to these factors as effort, talent (or natural abilities) and social background, but they may also be given other interpretations.¹ Let $\Omega^E = \{e^1, e^2, \dots\}$ be the set of possible effort levels, $\Omega^T = \{t^1, t^2, \dots\}$ the set of possible talent levels, and $\Omega^S = \{s^1, s^2, \dots\}$ the set of possible social background levels. Throughout the paper we will leave open the relevant conception of the type of benefits that a liberal egalitarian theory seeks to equalize. We will, however, for the sake of simplicity refer to an individual's outcome as her income. The pre-tax income function $f : \Omega \rightarrow \mathfrak{R}$, where \mathfrak{R} is the income space and $\Omega = \Omega^E \times \Omega^T \times \Omega^S$, is assumed to be strictly increasing in all three variables (i.e., $f(e^2, t^1, s^1) > f(e^1, t^1, s^1)$), and similarly for talent and social background). Moreover, we assume that for some effort level, it is possible to compensate an unfortunate social background with a high talent (i.e., for some $e \in \Omega^E$, $t^j, t^k \in \Omega^T$, $s^m, s^n \in \Omega^S$, where $t^j < t^k$ and $s^m < s^n$, $f(e, t^j, s^n) = f(e, t^k, s^m)$).

Let $a_i = (a_i^E = e, a_i^T = t, a_i^S = s)$ be a characteristics vector of person i and $a = (a_1, \dots, a_n)$ a characteristics profile of society in a particular situation. Let Ω^N be the set of all possible characteristics profiles of society. The proofs rely on some very weak richness assumptions on the set of all possible characteristics profiles. We state these assumptions formally in the appendix, together with the proofs of the two propositions.

The aim of the analysis is to study how the location, and relocation, of the responsibility cut should affect the fairness argument for redistribution within a liberal egalitarian framework. For this purpose, we rule out incentive considerations, which we do by assuming that the factors under personal control are unaffected by the design of the redistribution mechanism. This implies that all allocations of post-tax income will be Pareto optimal (as long as we assume that people have self-interested preferences and a positive

¹The model and the results can easily be generalized to situations with more than three types of factors and to situations where the factors are multidimensional. The factors can also be given other interpretations. We may for example substitute talent and social background with two different aspects of people's talent, e.g., people's IQ and their physical strength.

marginal utility of income). We will refer to the optimal level of redistribution in this situation as the ideal level of redistribution, that is, the level of redistribution which should take place if we only needed to take into account liberal egalitarian fairness considerations.

In formalizing the responsibility cut, it is useful to introduce the set R^P , which is the power set of the set $R = \{E, T, S\}$. The power set R^P consists of all possible subsets of the set R , including the empty set. A set $r \in R^P$ gives us the factors people are held responsible for and we refer to this set as the responsibility set. For example, $r = \{E\}$ represents the view that people only are held responsible for effort, $\tilde{r} = \{E, T\}$ the view that people are held responsible for both talent and effort, and so on. Hence, we have a relocation of the responsibility cut when we move from r to \tilde{r} , where such a relocation gives people more responsibility whenever $r \subset \tilde{r}$.

Our object of study is a redistribution mechanism, F , which for any characteristics profile of society and any specification of the responsibility set determines a distribution of income among the individuals in the economy. Formally, $F: \Omega^N \times R^P \rightarrow \mathfrak{R}^n$. We assume that F satisfies the no-waste condition $\sum_{i=1}^n F_i(a, r) = \sum_{i=1}^n f(a_i)$, $\forall a \in \Omega^N$.

In this framework, liberal egalitarian ethics can be seen as consisting of two parts; *the principle of equalization* and *the principle of responsibility*. The principle of equalization captures the core egalitarian intuition underlying liberal egalitarianism, namely that individuals who are identical with respect to all responsibility factors should have the same outcome. In our model this implies that all individuals who are identical with respect to all variables in the responsibility set $r \in R^P$ should have the same post-tax income. Formally, we can state this principle as follows.

Equal Income for Equal Responsibility Factors (EIERF): For any $a \in \Omega^N$, $r \in R^P$ and $j, k \in N$, if $a_j^I = a_k^I$ for all $I \in r$, then $F_j(a, r) = F_k(a, r)$.

EIERF is not inconsistent with huge inequalities in income as long as these inequalities correspond to differences in responsibility factors, and hence is a much weaker requirement than strict egalitarianism. *EIERF*, however, implies strict egalitarianism if r is empty (i.e., if individuals are not held responsible for anything). If $r = \{E, S, T\}$ (i.e., if individuals are responsible for everything), then *EIERF* implies formal equality or anonymity, and thus is consistent with no redistribution at all. Hence, the framework covers a wide range of normative perspectives.

The interpretation of the principle of responsibility is a controversial issue (see Bossert and Fleurbaey (1996), Cappelen and Tungodden (2003,

2004a,b), Tungodden (2005)). However, any reasonable interpretation should imply that a person who exercises more responsibility than another person should have a higher post-tax income, where a person j is said to exercise more responsibility than another person k if j has a higher value than k on at least one responsibility factor and has at least equally high value on all other responsibility factors. Formally we can state this minimal requirement as follows.

Minimal Reward (MR): For any $a \in \Omega^N$, $r \in R^P$ and $j, k \in N$, if $a_j^I \geq a_k^I$ for all $I \in r$ and $a_j^I > a_k^I$ for some $I \in r$, then $F_j(a, r) > F_k(a, r)$.

By way of illustration, if people only are held responsible for effort, then this requirement implies that a person who exercises more effort should have a higher post-tax income. MR is empty if r is empty, i.e., if there is no factor that we hold people responsible for, then there is no basis for rewarding people. In this case, MR is consistent with strict egalitarianism.

3 Equalization of a non-responsibility factor

Social and technological developments may contribute to equalization of non-responsibility factors. It is for example commonly argued that the quality of elementary education should be considered beyond the control of individuals. If so, then the development of a public school system may move us in a direction where we have more equality in educational background in society. Similarly, the development of a public system of health provision may reduce inequality in health, or modern genetics may make it possible to equalize some parts of people's genetic abilities (if the technology is made broadly available).

How should such a development affect the ideal level of redistribution in society? It seems intuitively appealing to require that an equalization of some non-responsibility factor should result in a reduction in the ideal level of compensatory redistribution. There are several possible ways of measuring the extent of compensatory redistribution, for example by looking at the average redistribution. However, for any reasonable measure it must be the case that a reduction in the level of compensatory redistribution implies that the level of redistribution has fallen for at least one person. Consequently, the intuition stated above implies that the redistribution mechanism should satisfy the following minimal requirement.

More Equality in a Non-responsibility factor, Less Redistribution (MENLR):

For any $a, \tilde{a} \in \Omega^N$, $r \in R^P$, if (1) for some $I \notin r$, there exist j, k such that $a_j^I \neq a_k^I$, (2) $\tilde{a}_i^I = \tilde{a}_j^I$ for all $i \in N$, and (3) $a_i^J = \tilde{a}_i^J$ for all $i \in N$ and all $J \neq I \in R$, then $|F_i(a, r) - f(a_i)| \geq |F_i(\tilde{a}, r) - f(\tilde{a}_i)|$ for some $i \in N$.

MENLR consists of three premises; the first states that there is inequality in one non-responsibility factor in the initial situation a , the second states that this inequality has been removed when we consider the situation \tilde{a} , and the third states that this is the only thing that has taken place when we move from a to \tilde{a} . Given these three premises, MENLR states that for at least one person there should be less redistribution in \tilde{a} than a .

Even though one might expect that equalization in a non-responsibility factor should reduce the need for redistribution, it turns out that MENLR does not hold within a liberal egalitarian framework.

Proposition 1 *There does not exist any F satisfying EIERF and MENLR.*

Proof. See Appendix. ■

The underlying intuition is rather straightforward. By equalizing a non-responsibility factor, one may actually increase the overall level of inequality in non-responsibility factors, and thus increase the ideal level of redistribution. The proposition establishes that this can happen within *any* liberal egalitarian system satisfying EIERF. This somewhat paradoxical result depends on there being negative correlation between various dimensions constituting a person's circumstances. For example, it may happen if we have negative correlation between social background and talent or between various dimensions of people's talent.

In any case, the result shows us that we have to be careful in analyzing the effects of partial equalization. In particular, it is important to analyze how different non-responsibility factors are correlated with each other. Starting from a situation with inequality in many non-responsibility factors, there will not necessarily be a monotonic path towards overall equality if we were to equalize one dimension at a time. This insight will also be useful in the analysis of the effect of a relocation of the responsibility cut.

4 Relocation of the responsibility cut

A relocation of the responsibility cut may arise for two types of reasons. First, it may arise because there is a change in the principles that underlie the assignment of individual responsibility. Second, it may change because

one reconsiders the implications of a given principle. Such reconsiderations may be necessary either as a result of social or technological developments or as a result of a change in our beliefs about the world. To illustrate, consider the common view that people should be held responsible only for factors under their control. Given this principle, the responsibility cut can be altered in two fundamentally different ways. First, it can be altered due to technological or social developments. Changes in the labor market and the development of modern medicine provide two examples. Historically, people's profession was to a large extent determined by their parents' profession or social background. Increased social mobility has given people more control over their choice of profession. In addition, deregulation of the labor market has given people more freedom to determine how many hours they want to work. These developments have moved new factors into the responsibility set.

Medical research may also potentially relocate the responsibility cut. An obvious example is technologies that allow people to change the way they look, e.g., by the use of hormones, implants or other techniques. Modern genetics provide the most radical prospect for relocating the cut between responsibility and non-responsibility factors (see also Buchanan et. al. (2000)). Targeted alterations of genomes may, for example, turn off some genes that causally contribute to the emergence of certain illnesses. This new technology thus makes it possible for the individual to affect factors that previously were outside her control. If people were given free access to such technology, this also would imply that new factors moved into the responsibility set.

The responsibility cut can also be relocated in an epistemic way, by new knowledge. Developments in for example psychology, sociology and medicine affect which factors we view as within or outside the control of individuals. This can again perhaps most easily be illustrated by developments in modern genetics. Advances in molecular genetics over the past decade have been remarkable. The entire human genome has been sequenced and many of the genetic loci associated with human disease are identified. Genetic research has greatly enhanced our understanding of disease mechanisms, and this is likely to have profound effects on our ability to characterize more clearly the causes of disease and how this relates to different factors within our outside individual control (Bell 1998). For example, a factor that we thought was under individual control may turn out to be determined by certain genetic traits. In this way, new knowledge may change the way we think of circumstances and choice. Given that people's health also affect individual

productivity, such a relocation of the responsibility cut may radically affect our redistributive policies of income.²

It seems reasonable to argue that if a relocation of the responsibility cut implies that people to a greater extent are held responsible for the factors determining their outcome, then their post-tax income should be closer to their pre-tax income. Similarly, if we move towards a situation where we consider people to be responsible for less, then it seems reasonable to argue that there should be more redistribution. Consequently, it seems reasonable to argue that the redistribution mechanism should satisfy the following minimal requirement.

More Responsibility Less Redistribution (MRLR): For any $a \in \Omega^N$, $r, \tilde{r} \in R^P$, if $r \subset \tilde{r}$, then $|F_i(a, r) - f(a_i)| \geq |F_i(a, \tilde{r}) - f(a_i)|$ for some $i \in N$.

To illustrate, suppose that $r = \{E\}$ and $\tilde{r} = \{E, T\}$. In this case, $r \subset \tilde{r}$, and people have more responsibility if we rely on \tilde{r} and not r . MRLR states that if the only thing that takes place is that we relocate our responsibility cut in this way, then at least one person's post-tax income should be closer to his or her pre-tax income. Surprisingly, it turns out that MRLR does not hold within a liberal egalitarian framework.

Proposition 2 *There does not exist any F satisfying EIERF, MR and MRLR.*

Proof. See appendix. ■

Proposition 2 shows that increased responsibility does not necessarily result in less redistribution within a liberal egalitarian framework.³ The underlying intuition is closely related to the intuition captured in Proposition 1. To make people responsible for a factor may be seen as the removal of one potential source of inequality in non-responsibility factors. If there are negative correlations between various non-responsibility factors, then this may actually contribute to increase overall inequality in circumstances, which would increase the ideal level of redistribution.

However, there is another important point captured by Proposition 2. When we make people responsible for a new factor, then we may also alter

²It may of course also affect our design of health policies, see Cappelen and Norheim (2004).

³Notice that strict egalitarianism satisfies both EIERF and MRLR, libertarianism satisfies MR and MRLR, and a number of mechanisms (for example all the egalitarian equivalent mechanisms satisfy EIERF and MR, see Bossert and Fleurbaey, 1996). Hence, all the three conditions are needed in order to establish an impossibility.

our views on who is exercising a high level of responsibility in society. For example, if the responsibility cut is relocated so as to shift talent from the group of non-responsibility factors to the group of responsibility factors, then those who have a high talent will be viewed as comparatively more responsible and those who have a low talent will be viewed as comparatively less responsible. This type of change may initiate more redistribution, at least as long as we stay within a liberal egalitarian framework satisfying the demand for minimal reward.

In sum, Proposition 2 shows that we cannot take for granted that technological, social, epistemological or ideological developments that shift some factor from the non-responsibility to the responsibility set will reduce the need for redistribution of income.

5 Concluding remarks

We have established that partial equalization of non-responsibility factors or the assignment of more responsibility to people does not necessarily imply less need for redistribution. We believe these to be interesting observations in a discussion of how we should expect liberal egalitarian redistributive policies to respond to fundamental technological, social or epistemological developments challenging our views on individual responsibility.

But the results may also add some insight into the present political debate on redistribution. Typically, right-wingers argue that people should be held responsible for a large fraction of the factors influencing their lives, whereas left-wingers hold individuals responsible for a smaller set of factors. Given these views, there has been a clear tendency for people on the right-wing to be less supportive of redistribution than people on the left-wing.

The difference between these two perspectives may be seen as a disagreement about where to locate the responsibility cut. Our analysis shows that in general we should not expect a monotonic relationship between the degree of responsibility assigned to people and the ideal level of redistribution, unless there are no negative correlations between various non-responsibility factors. Hence, liberal egalitarian theory does not support the claim that a move to the right necessarily should imply less redistribution (or similarly, that a move to the left necessarily should make us more supportive of redistribution). Such generalizations either rely on misconstrued ideas about the relationship between responsibility and redistribution or on empirical claims

that need verification.

6 Appendix

6.1 The richness assumption

Both proofs rely on a very weak richness assumption on the set of all possible characteristics profiles. It says that the redistribution function should cover a situation where we can divide society into two groups; one group being more talented but with a more unfortunate social background and the other group being less talented but with a more fortunate background, but where the groups exercise the same level of effort and have the same pre-tax income. In addition, in the proof of Proposition 1, we also have to assume that we may consider a situation where we have equalized their social background.

Formally, this can be stated as saying that for some $e \in \Omega^E$, $t^j, t^k \in \Omega^T$, and $s^m, s^n \in \Omega^S$, where $t^j < t^k$ and $s^m < s^n$, there exist $a, \tilde{a} \in \Omega^N$ such that $a_i = (e, t^k, s^m)$ for all $i = 1, \dots, k$ and $a_i = (e, t^j, s^n)$ for all $i = k + 1, \dots, n$, where $f(e, t^k, s^m) = f(e, t^j, s^n)$, and $\tilde{a}_i = a_i$ for all $i = 1, \dots, k$ and $\tilde{a}_i = (e, t^k, s^n)$ for all $i = k + 1, \dots, n$.

6.2 Proof of Proposition 1

By assumption, there exist $a, \tilde{a} \in \Omega^N$ such that $a_i = (e, t^k, s^m)$ for all $i = 1, \dots, k$ and $a_i = (e, t^j, s^n)$ for all $i = k + 1, \dots, n$, where $f(e, t^k, s^m) = f(e, t^j, s^n)$, and $\tilde{a}_i = a_i$ for all $i = 1, \dots, k$ and $\tilde{a}_i = (e, t^k, s^n)$ for all $i = k + 1, \dots, n$. We will only prove the result in the two-person case, the extension to the many person case being straightforward. Hence, $k = 1$ and $n = 2$. Consider $r = \{E\}$.

(i) By *EIERF*, $F_1(a, r) = F_2(a, r)$.

(ii) By the efficiency of F , $F_1(a, r) + F_2(a, r) = f(a_1) + f(a_2)$, and hence, taking into account (i) and the assumption that $f(a_1) = f(a_2)$, we have that $|F_1(a, r) - f(a_1)| = 0$ and $|F_2(a, r) - f(a_2)| = 0$.

(iii) By *EIERF*, $F_1(\tilde{a}, r) = F_2(\tilde{a}, r)$.

(iv) By the fact that f is strictly increasing in t , we have that $f(\tilde{a}_2) > f(a_2)$. Moreover, by assumption, $f(a_1) = f(\tilde{a}_1)$. By the efficiency of F , $F_1(\tilde{a}, r) + F_2(\tilde{a}, r) = f(\tilde{a}_1) + f(\tilde{a}_2) > f(a_1) + f(a_2)$. Hence, taking into account (iii), $F_1(\tilde{a}, r) > \frac{1}{2}[f(a_1) + f(a_2)] = f(a_1) = f(\tilde{a}_1)$, i.e., $|F_1(\tilde{a}, r) - f(\tilde{a}_1)| > 0$.

By efficiency it also follows that $|F_2(\tilde{a}, r) - f(\tilde{a}_2)| = |F_1(\tilde{a}, r) - f(\tilde{a}_1)| > 0$. This violates MENLR, and the result follows.

6.3 Proof of Proposition 2

By assumption, there exists $a \in \Omega^N$ such that $a_i = (e, t^k, s^m)$ for all $i = 1, \dots, k$ and $a_i = (e, t^j, s^n)$ for all $i = k + 1, \dots, n$, where $f(e, t^k, s^m) = f(e, t^j, s^n)$. We will only prove the result in the two-person case, the extension to the many person case being straightforward. Hence, $k = 1$ and $n = 2$.

(i) Consider $r = \{E\}$. By *EIERF*, $F_1(a, r) = F_2(a, r)$.

(ii) By the efficiency of F , $F_1(a, r) + F_2(a, r) = f(a_1) + f(a_2)$, and hence, taking into account the assumption that $f(a_1) = f(a_2)$, we have that $|F_1(a, r) - f(a_1)| = 0$ and $|F_2(a, r) - f(a_2)| = 0$.

(iii) Consider $\tilde{r} = \{E, T\}$. By MR, $F_1(a, \tilde{r}) > F_2(a, \tilde{r})$.

(iv) By the efficiency of F , $F_1(a, r) + F_2(a, r) = F_1(a, \tilde{r}) + F_2(a, \tilde{r})$. Consequently, taking into account (i) and (iii), $F_1(a, \tilde{r}) > F_1(a, r)$ and $F_2(a, \tilde{r}) < F_2(a, r)$.

(v) By (ii) and (iv), $|F_1(a, \tilde{r}) - f(a_1)| > 0$ and $|F_2(a, \tilde{r}) - f(a_2)| > 0$. But this violates MRLR, and the result follows.

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