Relocating the responsibility cut: Should more responsibility imply less redistribution?[¤]

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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 a¤ected 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

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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 a¤ects 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 justi…able 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 level of redistribution 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 di¤erences 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 …rst 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 …rst 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 $N = \{1, \ldots, n\}$, $n \geq 2$, 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 $\Theta^E = \{e^1, e^2, \ldots\}$ be the set of possible effort levels, $\Theta^T = \{t^1, t^2, \ldots\}$ the set of possible talent levels, and $\Theta^S = \{s^1, s^2, \ldots\}$ the set of possible social background levels. We also simplify by considering outcome as defined by a person's income. The pre-tax income function $f : \Theta \to \mathbb{R}$, where $\mathbb{R}$ is the income space and $\Theta = \Theta^E \times \Theta^T \times \Theta^S$, 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 $e^1 \in \Theta^E$, $t^1, t^2 \in \Theta^T$, $s^1, s^2 \in \Theta^S$, $f(e^1, t^1, s^2) = f(e^1, t^2, s^1)$).

Let $a_i = (a_i^E = e, a_i^T = t, a_i^S = s)$, be a characteristics vector of person i and $a = (a_1, \ldots, a_n)$ a characteristics profile of society in a particular situation. Let Θ^N be the set of all possible characteristics profiles of society. Both proofs rely on a 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 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

[1] The 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.

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 a power set of the set R containing the three parameters $E; T; S$. Any set $r \in R^P$ gives us the factors people are held responsible for, e.g., $r = \{E\}$ represents that people are only held responsible for effort, $r' = \{E; T\}$ 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 r', where such a relocation gives people more responsibility whenever $r \subset r'$.

In sum, our object of study can be described as a redistribution mechanism $F: \Omega^N \times R^P \to \mathbb{R}^n$. 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 core egalitarian intuition underlying liberal egalitarianism is the idea 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. We can state this principle of equalization 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 $a_j^l = a_k^l$ for all $l \in r$, 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 (2004)), but any reasonable interpretation should imply that persons exercising more responsibility should receive a higher post-tax income than people exercising less responsibility.

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

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 a¤ect the level of redistribution in society? As noted in the introduction, we might expect equalization of some non-responsibility factors to result in a reduction in the ideal level of compensatory redistribution. Formally, we can state this intuition as follows.

More Equality in a Non-responsibility factor, Less Redistribution (MENLR): For any $a; \bar{a} \in \mathcal{N}$, $r \in \mathbb{R}^P$; if (1) for some $I \supseteq r$, there exist j,k such that $a^I_j \neq a^I_k$, (2) $\bar{a}^I_i = \bar{a}^I_j$ for all $i \in N$, and (3) $a^J_i = \bar{a}^J_i$ for all $i \in N$ and all $J \neq I \in R$, then $|F_i(a; r) - f(a_i)| \geq |F_i(\bar{a}; r) - f(\bar{a}_i)|$ for all $i \in N$:

MENLR consists of three premises; the …rst 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 $\bar{a}$, and the third states that this is the only thing that has taken place when we move from a to $\bar{a}$. Given these three premises, MENLR states that there should be less redistribution in $\bar{a}$ than a.

Even though it may seem plausible 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. Whether this actually will be the case in a particular situation, is an empirical question. 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 believes about the world. To illustrate, consider the standard 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 degree determined by their parents' profession or social background. Increased social mobility has given people more control over this factor. Deregulation of the labor market has also given people more freedom to determine how many hours they want to work. These developments have in other words shifted some factors from the set of factors outside individual control to the set of factors within individual control.

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 o¤ some genes that causally contribute to the emergence of certain illnesses. This new technology thus makes it possible for the individual to a¤ect factors that previously were outside her control. If people were given free access to such technology, this would imply that new factors moved from the set of non-responsibility factors to the set of responsibility factors.

The responsibility cut can also be relocated in an epistemic way, by new knowledge. Developments in for example psychology, sociology and medicine a¤ect which factors we view as under or outside the control of individual agents. 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 identi…ed. Genetic research has greatly enhanced our understanding of disease mechanisms, and this is likely to have profound e¤ects on our ability to characterize more clearly the causes of disease and how this relates to di¤erent 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 a¤ect individual productivity, such a relocation of the responsibility cut may radically a¤ect our redistributive policies of income.[2]

As noted in the introduction, 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 they should also to a greater extent bear the consequences of their choices. 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. Formally, we can capture this intuition by the following condition.

More Responsibility Less Redistribution (MRLR): For any $a \in \Delta^N$; $r, r' \in R^P$; if $r \geq r'$, then $|F_i(a; r) - f(a_i)| \leq |F_i(a; r') - f(a_i)|$ for all $i \in N$:

Suppose that $r = f(E)$ and $r' = f(E; T)$. In this case, $r \geq r'$, and people

[2] It may of course also a¤ect our design of health policies, see Cappelen and Norheim (2004).

have more responsibility if we rely on 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 each person's post-tax income should be closer to his or her pre-tax income, that is, there should be less redistribution. 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 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 of 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.

[3] Notice that strict egalitarianism satis…es both EIERF and MRLR, libertarianism satis…es 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.

5 Concluding remarks

We have established that partial equalization of non-responsibility factors or the assignment of more responsibility to people do 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 in‡uencing 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 di¤erence 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 veri…cation.

6 Appendix

6.1 The richness assumption

Both proofs rely on a very weak richness assumption on the set of all possible characteristics pro…les. 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 e¤ort 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 $e^1 \in \Theta^E$, $t^1, t^2 \in \Theta^T$, and $s^1, s^2 \in \Theta^S$, there exist $a, \tilde{a} \in \Theta^N$ such that $a_i = (e^1, t^2, s^1)$ for all $i = 1, \ldots, k$ and $a_i = (e^1, t^1, s^2)$ for all $i = k+1, \ldots, n$, where $f(e^1, t^1, s^2) = f(e^1, t^2, s^1)$, and $\tilde{a}_i = a_i$ for all $i = 1, \ldots, k$ and $\tilde{a}_i = (e^1, t^2, s^2)$ for all $i = k+1, \ldots, n$.

6.2 Proof of Proposition 1

By assumption, there exist $a, \tilde{a} \in \Theta^N$ such that $a_i = (e^1, t^2, s^1)$ for all $i = 1, \ldots, k$ and $a_i = (e^1, t^1, s^2)$ for all $i = k+1, \ldots, n$, where $f(e^1, t^1, s^2) = f(e^1, t^2, s^1)$, and $\tilde{a}_i = a_i$ for all $i = 1, \ldots, k$ and $\tilde{a}_i = (e^1, t^2, s^2)$ for all $i = k+1, \ldots, n$. 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 $F_1(a, r) = f(a_1)$ and $F_2(a, r) = f(a_2)$.

(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), $F_1(\tilde{a}, r) > \frac{1}{2}[f(a_1) + f(a_2)] = f(a_1)$. But, given (ii), this violates MENLR, and the result follows.

6.3 Proof of Proposition 2

By assumption, there exists a $a \in \Theta^N$ such that $a_i = (e^1, t^2, s^1)$ for all $i = 1, \ldots, k$ and $a_i = (e^1, t^1, s^2)$ for all $i = k+1, \ldots, n$, where $f(e^1, t^1, s^2) = f(e^1, t^2, s^1)$: 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 $F_1(a, r) = f(a_1)$ and $F_2(a, r) = f(a_2)$.

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

(iv) By the e¢ciency of F, $F_1(a;r) + F_2(a;r) = F_1(a;r') + F_2(a;r')$: Consequently, taking into account (i) and (ii), $F_1(a;r') > F_1(a;r)$ and $F_2(a;r') < F_2(a;r)$:

(v) By (ii) and (iv), $F_1(a;r') > F_1(a;r) = f(a_1)$ and $f(a_2) = F_2(a;r) > F_2(a;r')$. But this violates MRLR, and the result follows.

References

[1] Arneson, R. (1989) "Equality and equal opportunity for welfare". Philosophical Studies 56: 159-194.

[2] Bell, J. (1998), "The new genetics: The new genetics in clinical practice". British Medical Journal, 316: 618-620.

[3] Bossert, W. (1995) "Redistribution mechanisms based on individual characteristics". Mathematical Social Sciences 29: 1-17.

[4] Bossert, W. and M. Fleurbaey (1996) "Redistribution and compensation". Social Choice and Welfare 13: 343-355.

[5] Buchanan A, D. Brock, N. Daniels and D. Wikler (2000) From Chance To Choice. Oxford University Press.

[6] Cappelen, A. and O. F. Norheim (2004) "Responsibility in health care - a liberal egalitarian approach". Forthcoming in Journal of Medical Ethics.

[7] Cappelen, A. and B. Tungodden (2003) "Reward and responsibility – how should we be a¤ected when others change their e¤ort". Politics, Philosophy and Ethics 2: 191-211 .

[8] Cappelen, A. and B. Tungodden (2004a) "Rewarding E¤ort". Discussion Paper 9/04, Norwegian School of Economics and Business Administration.

[9] Cappelen, A. and B. Tungodden (2004b) "The Liberal Egalitarian Paradox". Discussion Paper 8/04, Norwegian School of Economics and Business Administration.

[10] Cohen, G. A. (1989) "On the currency of egalitarian justice". Ethics 99: 906-944.

[11] Dworkin, R. (1981) “What is equality? Part 2: equality of resources”. Philosophy and Public A¤airs 10: 283-345.

[12] Fleurbaey, M. (1994) “On fair compensation”. Theory and Decision 36: 277-307.

[13] Fleurbaey, M. (1995a) “Equal opportunity or equal social outcome”. Economics and Philosophy 11: 25-55.

[14] Fleurbaey, M. (1995b) “The requisites of equal opportunity”. In Social Choice, Welfare, and Ethics. Barnett W. A., Moulin H., Salles M., and Scho…eld N. (eds). Cambridge University Press: 37-54.

[15] Fleurbaey, M. (1995c) “Three solutions for the compensation problem”. Journal of Economic Theory 65: 505-521.

[16] Fleurbaey, M. (1995d) “Equality and responsibility”. European Economic Review 39: 683-689.

[17] Le Grand, J. (1991) Equity and Choice: An Essay in Economics and Applied Philosophy. Harper Collins Academic.

[18] Rawls, J. (1971) A Theory of Justice. Harvard University Press.

[19] Roemer, J. (1993) “A pragmatic theory of responsibility for the egalitarian planner”. Philosophy and Public A¤airs 22: 146-166.

[20] Roemer, J. (1996) Theories of Distributive Justice. Harvard University Press.

[21] Roemer, J. (1998) Equality of Opportunity. Harvard University Press.

[22] Tungodden, B. (2004) “Responsibility and redistribution: The case of …rst-best taxation”. Forthcoming in Social Choice and Welfare.