

CentER 

Discussion Paper

No. 2010–73

**WHY STATUS EFFECTS NEED NOT JUSTIFY EGALITARIAN  
INCOME POLICY**

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July 2010

ISSN 0924-7815

# Why Status Effects Need not Justify Egalitarian Income Policy

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## Abstract

Economic research overwhelmingly shows that the utility individuals derive from their income depends on the incomes of others. Theoretical literature has proven that these status effects imply a more egalitarian income policy than in the conventional case, in which people value their income independently from the income of others. This article qualifies this conclusion in three ways. First, this policy implication holds if low income groups are sensitive to status, but not if high income groups are predominantly so. Neither do status effects provide an economic rationale for egalitarian income policy if they only pertain to peer groups with similar income levels. Third, if status effects are grounded in vices like envy, jealousy, grudgingness or spite, a moral basis for egalitarian income policy is lacking, because distributive justice cannot be based on perverse preferences.

JEL classification numbers: D62, H23

Keywords: relative income; positional goods; optimal taxation; egalitarian income policy; redistribution; status effects; envy

## 1. Introduction

Adam Smith argued in the *Wealth of Nations* that standards of decency are socially determined: ‘the Greeks and Romans lived.... very comfortably though they had no linen’ but ‘in the present time, through the greater part of Europe, a creditable day-laborer would be ashamed to appear in public without a linen shirt’ (Smith, 1776: 541). In standard economic theory, consumers are assumed to care only about absolute levels of income or consumption. However, there is considerable empirical evidence that supports Smith’s ideas and shows that relative income and consumption are important determinants of individual well-being and behavior. One of the earliest researches of Easterlin (1974) in this research field indicated that only relative income matters to individuals. More recent research indicates a less extreme position in which utility depends on both absolute and relative income (Alessie and Kapteyn, 1991; Solnick and Hemenway, 1998; Alpizar et al 2005; Carlsson et al, 2007).

Relative income concerns imply that an increase in income of an individual imposes negative externalities on the well-being of others. Therefore, this finding suggests that government should intervene to reduce over-consumption (Layard, 2003; Graafland, 2007). More specifically, literature on optimal taxation has shown that concerns for relative positions imply higher marginal tax rates and income redistribution from wealthy to poor citizens (Boskin and Sheshinski, 1978; Oswald, 1983; Blomquist, 1993; Persson, 1995; Ireland, 2001; Wendner, 2003; Wendner and Goulder, 2008; Aronsson and Johansson-Stenman, 2008; Samano, 2009; Wendner, 2010).

In this paper I develop, however, three arguments that restrict the potential of the policy implication of previous literature. The first argument is derived by taking into account that status effects may be different for high and low income groups. Using a simple model that derives optimal distribution for two types of individuals, I find that status effects only give rise to redistribution if the low income groups exhibit status effects. If status effects mainly pertain to high income groups, they present no or less reason for redistribution. The second argument is derived by introducing peer group reference income levels. I show that if reference income levels are only related to peer groups with similar income levels, no redistribution from rich to poor income groups is implied. The third type of argument against redistribution based on status effects is more philosophical in nature. This argument acknowledges that status effects may be rooted in morally dubious sentiments like envy, jealousy, grudgingness or spite. This kind of preferences provides no morally valid reason for redistribution.

The contents of this paper are as follows. Section 2 gives a short introduction into social theories of status effects and recent empirical research. In section 3, I will investigate the implications of divergent status effects for income distribution for two boundary situations: maximin and utilitarianism, assuming that reference levels of income are related to average income. In section 4, I will introduce relative preferences that are related to peer group income levels and re-analyse the

implications for income policy. Section 5 provides the moral argument against correcting income distribution because of status effects. Section 6 summarizes the main conclusions.

## **2. Relative income preferences: social theory and empirical evidence**

The notion that individuals judge the adequacy of their income by a socially determined standard has been voiced by several social theorists.

A well-known account of status goods is given by Thorstein Veblen in his 1899 classic *The Theory of the Leisure Class*. He argues that consumption is mainly important not for the intrinsic functionality of products to satisfy material needs, but for its social symbolism. Members of a certain social class secure their status by making their wealth visible. They signal their status by luxury goods. Wealth or power must be put in evidence, for esteem is awarded only on evidence (Schor, 1997).

Another philosopher that has stressed the social context of the satisfaction from the consumption of goods or services is René Girard (1961). According to Girard, individuals want certain goods or services only because other people want these goods or services. The value an individual attaches to a certain good is derived from the value he or she supposes other people attach to this good. He calls this type of desire ‘mimetic’, because individuals copy the wants of other individuals. Mimesis is a central human characteristic that enables individuals to learn from other persons.

The idea of the relative value of consumption because of social interaction has also been strongly put forward by Fred Hirsch (1977). Hirsch distinguishes between private goods (Hirsch calls them material goods) and goods that confer status, which he calls ‘positional goods’. The satisfaction from the consumption of private goods is independent of the consumption of material goods by others. For example, to a hungry man, the satisfaction derived from a square meal is unaffected by the meals other people eat, or if he is hungry enough, by anything else they do. His meal is an entirely individual affair. In technical terms, it is a pure private good. Positional goods are, in contrast, subject to social scarcity. The satisfaction from a positional good is derived from its relative position alone. Hirsch distinguishes between various types of social scarcity. First, social scarcity may be caused by absolute physical scarcities. Thus, part of the attraction of a Rembrandt or exclusive access to a particular natural landscape, is derived from being the only one of its kind. A second type of consumer scarcity is social. This concerns consumer goods that are limited in absolute supply not by physical, but by social factors. The sole source of satisfaction is derived from the symbol rather than the substance: the utility derived from the good diminishes by the existence of good copies. A third type of social scarcity concerns goods that generate satisfaction independent of the satisfaction enjoyed by others, but are yet influenced by the consumption or activities of others, for example, by congestion. Congestion is not limited to mutual impediment in physical form, as in traffic

congestion, but can also arise in purely social relationships like leadership positions. Only one person can be the leader in an organization.

The distinguishing characteristic of these positional goods is not, of course, scarcity as such: private goods are also scarce in the sense of being attainable only through the sacrifice or displacement of other satisfactions. But this regular economic scarcity will diminish over time if these types of goods become increasingly available through growth in production. In contrast, the scarcity of positional goods is permanent. The possession of these goods constitutes what can be called ‘oligarchic’ wealth which is possible for the few, but never – whatever the level of average productivity - for all.

Recent empirical research has abundantly confirmed the importance of relative income preferences (Brekke and Howarth, 2002).<sup>1</sup> A well-known research is the one by Solnick and Hemenway (1998), who asked respondents whether they would prefer to be a poor but relatively rich person in a poor society or a rich but relatively poor person in a rich society.<sup>2</sup> In this study, roughly 50 per cent of the respondents chose each option. Assuming that respondents seek to maximize a utility function  $u = (1-b) \ln(y) + b \ln(y/y_{av})$ , where  $y$  denotes one’s own net income and  $y_{av}$  the average net income level, the parameter  $b$  would be equal to 1/3. The study by Solnick and Hemenway also reveals that positional competition is more important for certain types of goods and services than for other types of variables. Positional considerations were, for example, important for physical attractiveness and education, but relatively unimportant for vacation time. People consistently favored a larger number of days off from work, suggesting that the enjoyment of leisure is comparatively free from status considerations.

A similar study was done by Johansson-Stenman et al (2002). They used an experiment where Swedish students made a choice between a society where an imaginary grandchild’s income would be higher than average income and, on the other side, a society where the grandchild would earn less than average income. Unlike Solnick and Hemenway (1998), they used several pair wise choices enabling them to calculate the degree of positionality for each individual. Again it was found that most people care about relative income.

A third example is Alpizar et al (2005). Using a ratio comparison utility function, they estimate that the mean degree of positionality is 0.45. This means that 45% of the utility increase from a small income increase arises from enjoying a higher

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<sup>1</sup> Cole et al. (1992) argue that there may also be other underlying preferences that are fundamentally individualistic and may explain the type of interdependencies created by status goods. For example, one could argue that people want a high status, because a high status enables one to obtain more private consumption. Thus, status goods would not be a goal and an argument in the utility function, but rather be a means to obtain private consumption. People with a high status get the best jobs and, thus, earn the highest income.

<sup>2</sup> Earlier, empirical evidence for the importance of relative payoffs was also provided by Agell and Lundborg (1995) and Bewley (1998) and Clark and Oswald (1996).

relative income. This fraction strikes a balance between the two extreme hypotheses that only relative income matters and, on the other side, that only absolute income matters. They repeat their experiment for different types of consumption (instead of income). Then they find that the degree of positionality is between 0.5 and 0.75 for visible goods like cars and housing, while lower than 0.25 for less visible goods like insurance and vacation, confirming that there are differences in the degree of positionality among different types of goods. Similar results were found by Carlsson et al (2007).

Another interesting survey is the one by Lehman (2001), who estimates the importance of relative pay-offs in a competitive business situation. Individuals were asked to report satisfaction with the results of a sales competition between two stores in the same market for various combinations of sales. The results show considerable emphasis on relative pay-offs: the satisfaction from their relative sales was about 9 times larger than the satisfaction from their sales in absolute numbers. The results also show some evidence of decreasing marginal impact and asymmetry. Doing worse than the opponent is somewhat more distasteful than doing better by the same amount. Furthermore, Lehman (2001) found evidence that pay-off changes were especially important when pay-offs were close to equal. For example, a sales gain of US \$ 4 million was worth only 5.2 units of satisfaction if the change was from US\$ 2 to 6 million with a corresponding decline in the competitor's sales from US\$ 18 to 14 million. However, a US\$ 3 million change from 12 to 15 and a corresponding decline in the competitor's sales from 15 to 12 million produced a much larger increase in satisfaction of 26.7.

### **3 Reference to average income**

The empirical research described in section 2 indicates that status has a major impact on choice behavior of individuals. In the next sections, I will research the implications of this kind of relative concerns for income distribution. In contrast to other literature<sup>3</sup>, I distinguish two models with alternative decision rules, the maximin rule and the utility maximization rule.

Since I am not so much interested in the details of the implications for tax structure or public good provision, I will develop a rather simple economic model that derives optimality forms of redistributive transfers from a better-off to a less-off person that suffice for the purpose at hand: that is, to show that status effects do not always imply egalitarian income policy. In this model, I will distinguish between two motives. On the one hand, it is assumed that the satisfaction that persons get from their income is partly related to their individual absolute level of income and partly to their relative income. On the other hand, it is assumed that reducing inequality by a

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<sup>3</sup> Except Boskin and Sheshinski (1978) who also analyse both maximin and a utilitarian social objective.

transfer from the better-off to the less-off may elicit negative utility effects, for example, because of disincentive effects on the economic effort of both groups that reduce their incomes.

Following Aronsson and Johansson-Stenman (2008), I assume that there are just two groups of persons in society that are equal in numbers, the high-ability (i.e. the rich) type ( $r$ ) and the low-ability (i.e. the poor) type ( $p$ ). Ex-ante (without redistribution), each individual earns a certain income,  $Y_r$  respectively  $Y_p$  (with  $Y_p = Q Y_r$  and  $Q < 1$ , reflecting the productivity differential). A transfer redistributes income from the rich to the poor.

The utility functions of the rich and the poor ( $u_r$  and  $u_p$  respectively) are modeled as<sup>4</sup>

$$(1a) \quad u_i = v(N_i - \alpha_i N) \quad ; \quad i = r, p; 0 < \alpha_i < 1; v' > 0; v'' < 0$$

$$(1b) \quad N = (N_r + N_p) / 2$$

$N_i$  denotes the net income,  $N$  average net income and  $\alpha_i$  the degree of positionality.<sup>5</sup> Equation (1) diverts from most other models in one crucial aspect. In particular, whereas Boskin and Sheshinski (1978), Oswald (1983), Wendner and Goulder (2008), Samano (2009) and Wendner (2010) all assume that the degree of positionality is homogeneous across all income groups, equation (1) allows different degrees of positionality for the rich and for the poor. A similar assumption is made by Aronsson and Johansson-Stenman (2008).<sup>6</sup>

There is apriori no reason to assume that  $\alpha_p > \alpha_r$  or the other way around, because there may be opposite forces at work. One could, for example, argue that if people get richer, their need for status slowly weakens and is replaced by a need for self actualization (as stressed by the needs hierarchy of Maslow (1943)). But one can also argue the opposite by noting that the rich have become rich just because they were initially more sensitive to status which stimulated them to develop and gain financial success. Another reason for assuming that the rich are more sensitive to status is that luxury goods are more subject to positional competition than goods that meet basic needs. Since the budget share spent on positional goods will be higher for rich than for poor income groups, they will also be confronted with more positional competition. An empirical indication for this asymmetry is that in rich countries

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<sup>4</sup> Lower cases denote functions, capitals denote variables, and Greek letters parameters.

<sup>5</sup> Equation (1a) assumes an additive impact of relative preferences. An alternative is the ratio comparison utility function (i.e.  $u_i = v(N_i / N^{\alpha_i})$ ) (Boskin and Sheshinski, 1978) or a combination of difference and ratio comparisons (Dupor and Liu, 2003). Since there are little empirical indications that the ratio formulation performs better in terms of explaining economic behavior (Alpizar et al, 2005) and since the ratio formulation does not yield qualitatively different results, we use the (simpler) additive formulation.

<sup>6</sup> Also Wendner (2003) allows diversity in the degree of positionality in his intergenerational model, but these differences only apply to the degree of positionality of different generations and not for different income groups.

happiness depends more on relative incomes than in poor countries (Oswald, 1997).  $v'' < 0$  reflects the standard assumption of decreasing marginal return from income. This is indicated by the empirical evidence of Lehman (2001) presented above that doing worse than the opponent is somewhat more distasteful than doing better by the same amount.

The net incomes of the rich and the poor are defined by, respectively,

$$(2a) \quad N_r = Y_r(1-T-g_r(T))$$

$$(2b) \quad N_p = Q Y_r(1+T/Q-g_p(T/Q))$$

$T$  denotes the transfer rate, i.e. the transfer that the rich pay to the poor as a ratio of  $Y_r$ .  $Y_i$  denotes the incomes of the rich and the poor respectively if the transfer is absent. The function  $g$  denotes indirect harmful effects of the transfer on utility which are assumed to be related to income.<sup>7</sup> We assume that these indirect effects are marginally increasing ( $g'' > 0$ ).

### 3.1. Maximin

The optimal distribution depends on the decision rule that the government will apply. If the government applies a maximin decision rule, the transfer should be set so high that the utility of the least advantaged ( $u_p$ ) be maximized. The first order condition then gives:

$$(3a) \quad (1 - g_p') (1 - 0.5\alpha_p) + (1 + g_r') 0.5 \alpha_p = 0$$

Or, alternatively,

$$(3b) \quad (1 - g_p') + 0.5 \alpha_p (g_p' + g_r') = 0$$

Equation (3a) shows that the transfer generates various types of benefits and costs for the poor. The first term ( $1$ ) expresses the utility of the poor from the increase in income from the transfer. The second term ( $-g_p'$ ) expresses the indirect costs of the transfer on the income of the poor. The third term ( $1 - 0.5\alpha_p$ ) shows that the impact of the direct and indirect income effects on the utility of the poor is eroded by relative income preferences, because the reference income (the average income) depends

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<sup>7</sup> The indirect effects consist of, for example, the inefficiency costs caused by the disincentive effects that the transfer has on the incomes of the rich and the poor, the costs of administrative systems as well as (the monetary equivalent of) negative feelings because of the lack of desert as the transfer is paid or earned with no performance in return.



partly on the income of the poor. The fourth term  $((1 + g_r') 0.5 \alpha_r)$  shows that relative income preferences increase the positive impact of the transfer on the utility of the poor by lowering the net income of the rich, both through the direct and indirect effects of the transfer on the net income of the rich.

Equation (3a) can be simplified to equation (3b) by noting that the status effects caused by the transfer's direct impact on income on the rich and the poor's incomes counterbalance. By taking the total differential of equation (3b), the impact of  $\alpha_p$  on T can be derived as:

$$(4) \quad (2 g_p'' - \alpha_p (g_p'' + g_r'')) \Delta T = (g_p' + g_r') \Delta \alpha_p$$

The right hand side of equation (4) shows that there are basically two reasons why the transfer should be set higher if status becomes more important. First, a rise in  $\alpha_p$  reduces the decline in the poor's utility caused by the indirect effect on the poor's income that results from the transfer. The second effect is that a higher status effect increases the poor's utility from the fall in income of the rich induced by the indirect effects that the transfer causes on the rich's income. The sum of both effects is expressed by the term  $(g_p' + g_r')$  in the right hand side of equation (4) and explains why a rise in  $\alpha_p$  increases the optimal transfer rate

The term between brackets on the left hand side of equation (4) gives an expression of the second order condition for maximal utility. The first term  $(2 g_p'')$  expresses the negative second order effect of an increase in transfer on the poor's income because it enforces the negative indirect effect on the poor's income. The other term  $(\alpha_p (g_p'' + g_r''))$  expresses a positive second order effect from a rise in transfer that arises from these indirect effects. Taken together, the right hand side of equation (4) implies that the second order condition is met if  $\alpha_p < 2 g_p'' / (g_p'' + g_r'')$ . This is the case if  $\alpha_p$  is substantially lower than 1 (which is confirmed by the empirical research reviewed above) and if the second-order indirect effects for the poor are not substantially smaller than the second-order indirect effects for the rich.

Finally, note that under maximin only the relative preferences of the poor count. Whether the rich are sensitive to status or not does not affect the optimal transfer.

### 3.2. *Utilitarianism*

The maximin principle is often criticized for not allowing a major improvement in the benefits of richer groups if it reduces the benefits of the worst off groups. The maximin principle and Rawls' difference principle that is based upon it, allows the smallest benefit to the smallest number of worst off to trump any benefit, however large, to any but the worst off (Parfit, 1998; Crisp, 2003). Similarly, the maximin decision rule does not allow trade-offs between the low, medium and high income

groups. Therefore, it accepts institutional changes that benefit the high income groups at the expense of medium income groups, as long as the lowest income group benefits as well.

Because of this criticism, we also consider another opposite extreme decision rule, namely that of utilitarianism that requires maximizing total utility with equal weights for the rich and the poor.<sup>8</sup> The first order condition for maximal utility then gives:

$$(5a) \quad s\{(1-g_p') (1-0.5\alpha_p) + (1+g_r') 0.5 \alpha_p\} = (1 + g_r') (1 - 0.5\alpha_r) + (1 - g_p') 0.5 \alpha_r$$

or, alternatively,

$$(5b) \quad s\{(1-g_p') + 0.5\alpha_p (g_p' + g_r')\} = (1 + g_r') - 0.5\alpha_r (g_p' + g_r')$$

With

$$(6) \quad s = v'(N_p - \alpha_p N) / v'(N_r - \alpha_r N) > 1.$$

The left side of equation (5a) expresses the positive utility effects of the transfer for the poor (with the four elements of equation (3a) discussed above). The right side shows the negative utility effect of the transfer to the rich with similar elements that we discussed above for the poor: The first term  $(1 + g_r')$  expresses the decline in the utility of the rich because of the transfer to be paid by them and the negative indirect effects on their income. The second term  $(1 - 0.5\alpha_r)$  shows that the impact of the direct and indirect income effects of the rich is eroded by relative preferences, because the reference level of income depends partly on their own income. The last term  $(1 - g_p') 0.5 \alpha_r$  shows that status effects increase the negative impact of the transfer on the utility of the rich by lowering their relative position, since the income of the poor improves.

Taking the total differential of equation (5b) gives:

$$(7) \quad \{2 (s g_p'' + g_r'') - (s \alpha_p + \alpha_r) (g_p'' + g_r'') - 2 A(\partial s / \partial T)\} \Delta T =$$

$$\{s(g_p' + g_r') + 2 A(\partial s / \partial \alpha_p)\} \Delta \alpha_p + \{(g_p' + g_r') + 2 A(\partial s / \partial \alpha_r)\} \Delta \alpha_r$$

With  $A = \{(1-g_p') + 0.5\alpha_p (g_p' + g_r')\}$

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<sup>8</sup> Roemer (2004) views maximin and utilitarianism as opposite poles of prioritarianism (the view that the 'worse off' should be given priority over the 'better off').

Note that equation (6) implies that  $\partial s/\partial T < 0$ ,  $\partial s/\partial \alpha_p > 0$  and  $\partial s/\partial \alpha_r < 0$ .

The left hand side of equation (7) shows that the sign of the second order condition is again theoretically ambiguous, but compared to the maximin model, the probability that this condition is met is even higher, because the transfer generates an additional counter effect by lowering the relative marginal utility of income of the poor ( $\partial s/\partial T < 0$ ).

From the right hand side we can conclude that an increase in the status effect of the poor again raises the optimal transfer rate. On top of the two reasons discussed under the maximin rule, the total utility decision rule adds one other effect, namely that a higher status effect of the poor causes their relative marginal utility from income to increase ( $\partial s/\partial \alpha_p > 0$ ).

The influence of the status effect of the rich needs some more explanation. A priori I had expected that status sensitivity of rich people would reduce the optimal transfer, because any income reduction caused by the transfer hurts more because their relative income declines ( $\partial s/\partial \alpha_r < 0$ ). However, equation (7) indicates also an opposite effect ( $g_p' + g_r'$ ). The explanation is that the status effect reduces the utility loss from the rich's indirect decline in income as well as increases the utility gain of the rich due to the indirect effects on the poor's income. The model does not allow any conclusion which of these effects dominates. But, just as in the maximin model, there is apparently a large asymmetry in the impact of status effects on optimal income distribution. What makes the optimal income distribution more egalitarian is whether the poor perceive relative preferences. Whether the rich are sensitive to status has much less an impact on optimal income distribution. This is in line with Aronsson and Johansson-Stenman (2008) who find that the difference between the degree of positionality of the low and high income group raises the optimal marginal income tax rate in their model.

Finally, it can easily be shown that these conclusions can be extended to the more general case of prioritarianism that gives more weight to the 'worse off' than to the 'better off'.

#### **4 Reference to peer group incomes**

Although section 3 derives some new results, the model's implication is still very similar to what has been previously found in literature: namely, that status effects (at least, for low income groups) provide an important rationale for redistribution of income from the rich to the poor, independently from whether the government applies maximin, utilitarianism or any intermediate prioritarian decision rule.

In this section I will argue, however, that there is one additional problem with this policy implication, namely that this result will only stand if relative preferences

are related to the overall, average income in society. In all models in literature this assumption is made. In most cases, the reference level of consumption is assumed to be equal to average consumption (Boskin and Sheshinski, 1978; Wendner, 2003; Wendner and Goulder, 2008; Aronsson and Johansson-Stenman, 2008), whereas Oswald (1983) and Wendner (10) uses a weighted average of consumption the weights being based on a distribution function  $F$  that reflects the distribution in preferences or income. Only Samano (2009) uses a more sophisticated weighting function that allows that agents may contribute to the consumption externality that society faces in a magnitude different from their population size (or preference or income). But he does not assume differences in the degree of positionality for different income groups nor analyses the special case that I will discuss below.

The point is that it is not very likely that people compare their income with the income of such a broad income group. Rather, they will focus on their neighbours or peer groups with which they are most acquainted and who provide a nearby point of reference. As argued by David Hume (1739): ‘It is not a great disproportion between ourselves and others which produces envy, but on the contrary, a proximity. A common soldier bears no envy for his general compared to what he will feel for his sergeant or corporal... A great disproportion cuts off the relationship, and keeps us from comparing ourselves with what is remote from us or diminishes the effects of the comparison’. Another nice example of this psychological phenomenon is given by De Mandeville who stated that a person who has to walk envies a person with a small carriage with four horses more than a person with a large carriage with six horses. Also Fehr and Schmidt (1999) argue that the social proximity among individuals is likely to influence reference groups. Also the empirical research by Lehmann (2001) indicates that concerns for relative positions are particularly important when the income of the reference group is close to equal. What I want to show in this section, is that if reference levels of income are not related to overall average income, but rather to the incomes of the own social class, its policy implication for optimal distribution changes dramatically.

If relative preferences do not pertain to average income, but to peer group income, equation (1a) changes into:

$$(8) \quad u_i = v((1 - \alpha_i) N_i)$$

Obviously, the relative preference will not influence the optimal solution if the government applies a maximin decision rule. This can be easily seen from the first order condition which now simply boils down to  $g_p' = I$ .

A more or less similar result holds if the government applies utilitarianism. The first order condition then becomes:

$$(9) \quad s(1-g_p') (1-\alpha_p) = (1 + g_r') (1 - \alpha_r)$$

with  $s = v'((1 - \alpha_p) N_p) / v'((1 - \alpha_r) N_r) > 1$ .

Total differentiation of equation (9) gives:

$$(10) \quad \{(s(1 - \alpha_p) g_p'' + (1 - \alpha_r) g_r'' - B(\partial s / \partial T)\} \Delta T = \\ \{-s(1 - g_p') + B(\partial s / \partial \alpha_p)\} \Delta \alpha_p + \{(1 + g_r') + B(\partial s / \partial \alpha_r)\} \Delta \alpha_r$$

With  $B = (1 - g_p') (1 - \alpha_p)$  and (again)  $\partial s / \partial T < 0$ ,  $\partial s / \partial \alpha_p > 0$  and  $\partial s / \partial \alpha_r < 0$

The second order condition is now unambiguously positive, since all terms in the left hand side of equation (10) are positive. Furthermore, just as in equation (8) we find again that the influence of the status effect for high income groups is ambiguous. On the one hand, a rise in  $\alpha_r$  causes a decline in the relative marginal utility of income of the poor ( $\partial s / \partial \alpha_r$ ) decreasing the optimal transfer. But, on the other hand, it also erodes the utility loss that the rich experience from their decline in income, since the reference level of income declines as well ( $1 + g_r'$ ). The overall impact of a rise in  $\alpha_r$  is therefore again uncertain and will be zero if the two opposite effects balance.

The main difference with the model in section 3 concerns the impact of the status effect of the poor. Whereas in the previous version of the model  $\alpha_p$  has an unambiguous positive impact on the optimal transfer, we find now an ambiguous effect that depends on two opposing influences. These effects are exactly contrary to the effects of  $\alpha_r$ . Because, on the one hand, a rise in  $\alpha_p$  now reduces the net utility gains from the transfer by proportionally raising the reference level of income ( $-s(1 - g_p')$ ). The opposite effect is that it raises the relative marginal utility of income of the poor ( $\partial s / \partial \alpha_p$ ).

Based on these effects, we can easily derive that an equal increase in the status effects of both groups ( $\Delta \alpha_p = \Delta \alpha_r$ ) will have almost no effect on the optimal transfer. In the special case that  $\alpha_p = \alpha_r$ , the status effect even completely drops out of the first order condition for maximal total utility and consequently exerts no impact whatsoever on the optimal transfer rate.

The policy implication that status effects imply a more egalitarian society therefore crucially depends on how reference levels of income are modeled. This underlines the need for more empirical research to how preferences relate to the incomes of other income groups. Until now, empirical research does not give us many hints to discriminate between alternative specifications of the reference level.

Another observation that peer group related status effects evoke is that equality resulting from redistribution may increase envy. As de Tocqueville stated in his 'Democracy in America' (1835): 'When inequality is the general rule in society, the greatest inequalities attract no attention. But when everything is more or less level, the slightest variation is noticed.' Redistribution policy may thus give rise to more envy. Because, if people particularly envy those in proportionate circumstances, redistribution of income increases the number of people they take to be their equals and compare themselves to. And, therefore, the more people there will be to envy. If an increase in envy reduces overall welfare (for example, because envious people may want to sabotage innovations that benefit others (Mui, 1995)), more redistribution might cause a decline in utility by enforcing positional competition.

## **5 Philosophical criticism**

I end this article by one other argument that casts doubt on the conclusion that income distribution should be more egalitarian because of the existence of status effects, as derived in section 3 and shown by previous research. This argument is more philosophical in nature. It starts with the notion that from a moral point of view one can doubt whether all preferences in a utility framework are legitimate. In economic utilitarianism it is normally assumed that individuals are sovereign and that their preferences cannot be criticized. However, from a moral point of view, one can criticize this assumption if individuals happen to have morally unacceptable preferences.

This criticism may be particularly relevant in this case, because status effects may be rooted in vices like envy, jealousy, grudgingness or spite. Rawls (1999) thinks of envy as the propensity to view with hostility the greater good of others, even though their being fortunate than we are does not detract from our advantages. Jealousy and grudgingness are reverse to envy. A person who is better off may wish those less fortunate than he to stay in their place. That is to say, he is jealous of his superior position and begrudges others the greater benefits that would put them on the same level with himself. A person is moved by spite if he denies others benefits that he does not need and cannot use himself. All these inclinations are collectively harmful, since the envious man is willing to deprive the persons who are better off to reduce the distance with himself whereas the jealous, grudging and spiteful man is willing to maintain the distance between himself and others. In classical virtue theory of Aristotle, envy is therefore considered a vice. Justice theories have, consequently, often abstracted from relative income preferences. For example, Rawls (1999) eschews this notion in the set-up of the decision strategy of self-interested and rational contract partners in the original position, on which he bases his principles of justice. Instead, he takes a rather individualistic starting point by postulating that contract partners in the original position are mutually disinterested. According to Rawls, the

postulate of mutual disinterest is necessary to ensure that the principles of justice avoid any controversial ethical elements. Relative income preferences caused by envy, jealousy, grudgingness or spite may be such a controversial element.<sup>9</sup> According to Rawls, a rational individual is not envious, at least if the differences between himself and others are not thought to be the result of injustice. Envy will arise mainly if people lack a sure confidence in their own value. Merely comparing how much income and wealth one has compared to what others have is a distraction. To become preoccupied with such economic comparisons is to become alienated from an orientation toward what really matters for the success of one's life.<sup>10</sup>

On the other hand, one can also argue that relative income preferences need not necessarily or always be disqualified as envy. They can also be interpreted as a natural social psychological phenomenon that people compare their condition with that of a reference group. People are social beings who learn from each other by social interaction, including comparing their relative incomes or consumption patterns. We cannot appreciate what we have in isolation. The unencumbered individual is in reality in large measure a product of a cultural environment that has formed his desires and needs. Knight (1923) already argued that what is desired is largely a matter of human relations rather than goods and services as such; we want things because other people have them, or cannot have them, as the case may be. Arneson (2007) argues that, even if one does not accept the claim that equality is intrinsically just and if one views justice as demanding only the elimination of poverty and no further redistribution, one should notice that positional goods competition implies that poverty includes a relative poverty component. Hence, justice pertains also to relative income in the sense of people having a level of income that is not too far below the average for their society.

## **6 Conclusions**

This article has researched the implications of status effects on income distribution. Empirical research has shown that individuals are not only concerned about their absolute income, but also partly about their relative income. Optimal tax literature has shown that the negative externality caused by this status effect implies that income redistribution is efficient.

In this paper I qualify this conclusion in three ways. First, I show that this income policy implication mainly depends on whether low income groups exhibit

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<sup>9</sup> Crisp (2003) and Nozick (1974) even believe that all appeals to relative fairness have their ultimate source in envy. Brennan (1973) shows that envy can motivate non-altruistic individuals to support redistribution programs.

<sup>10</sup> Only if society permits such large disparities in income that poor people cannot help but feel a loss of self-esteem, Rawls judges that envy is excusable, because self-respect is one of the main primary goods that any rational person values. Hence, developing envious feelings if one suffers a loss in self-respect due to extreme income inequality is not irrational.

status effects. Whether rich income groups are sensitive to status is likely to have a much less important impact on the optimal level of redistribution. This finding is independent from the type of decision rule that the government applies (maximin decision rule, utilitarianism or an intermediate prioritarian decision rule).

Second, I find that the specification of the reference group with whom people compare their income is decisive. If status effects only pertain to peer groups with similar income levels, redistributing income from rich to poor persons is not efficient and the economic rationale for an egalitarian income policy vanishes. Again, this finding is robust for the type of decision rule of the government.

A third argument that casts doubt on the legitimacy of egalitarian income policy based on status effects is that this effect may be rooted in feelings of envy, jealousy, grudgingness or spite. In moral theory, these feelings are normally considered a vice and therefore provide no morally legitimate basis for redistribution policy. However, status effects do not necessarily only exist because of envy or related vices. One can also interpret status effects as a normal expression of the social nature of mankind in the sense that people can only value things in relation to the valuation and situation of others. In that case, status effects do provide a legitimate basis for redistribution.

These theoretical findings set a new agenda for empirical research to status effects. In particular, in order to ascertain its income policy implications, we should obtain more insight into the empirical relevance of status effects among poor people, the exact reference group to which they compare their incomes and what the underlying motive is why they compare their incomes with those of others. The current empirical evidence does not discriminate among these alternatives. As long as this is the case, the probability that the egalitarian implication of status effects can be maintained seems rather small. Because this will only be the case if empirical research confirms three conditions: the poor are sensitive to status effects; their reference levels of income relate to the income of higher income groups and not only to peer group income levels; these status effects are not motivated by envy, but derive from more morally neutral social interaction processes. If only one of these three conditions fails, the status effects cannot serve as a ground for egalitarian income policy.

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