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The Political Economy of Redistribution Policy

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Abstract

We review the literature on the public choice approach to explaining redistribution policies. The focus is on policies that are pursued with the sole reason to redistribute initial endowments. Moreover, we restrict ourselves to redistribution in democracies. In democratic settings, generic redistribution games lack equilibria. Structure-inducing rules that give rise to realistic redistribution patterns may concern the underlying economic model, political institutions, and firmly established preferences, beliefs, and attitudes of the voters. We present the respective lines of argument in turn and then present the related empirical evidence.

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1. Introduction

In an early overall view, Putterman (1997) famously asked "Why have the rabble not redistributed the wealth?" In a comment on Putterman's essay, Wallerstein (1997) already remarked that the question at hand is a difficult one to answer "not because it is hard to think of possible answers but because there are so many." Because of this plethora of possible answers, reviews of this literature cannot be exhaustive; they need to focus on a subjective if not idiosyncratic choice of salient issues. This is at least the strategy that most surveys and handbook articles of this sprawling literature have followed in the wake of Putterman's first attempt: Harms and Zink (2003a), Brock (2007), Londregan (2008), Alesina and Giuliano (2011), and Acemoglu et al. (2015).

Our survey focuses on policies that are pursued with the sole reason to redistribute initial endowments. We are not concerned with policies that merely happen to have redistributive effects; the public choice approach, strictly speaking, always identifies the gainers and losers from certain policies and then proceeds to explain how political institutions transform the divergent interests into the observed political outcomes. Policies with redistributive effects thus do not delineate a subfield of public choice analysis. We also restrict ourselves to redistribution in democracies. Redistribution in autocracies and redistributive effects of democratization are, of course, closely related to our topic and have common roots in the public choice approach; Gordon Tullock's 1987 monograph on *Autocracy* may serve as an example. These issues belong, however, to different and quite self-contained bodies of literature. Recent studies include, for example, Michael Albertus' 2016 monograph on land reforms in autocracies, the empirical tests of Acemoglu and Robinsons' (2000) hypothesis of preemptive franchise extension by Aidt and Jensen (2014) and Aidt and Franck (2015), and the study by Ansell and Samuels (2010) that views democratization as a bid of rising economic groups for protection against state kleptocracy.

2. Theory

The public choice approach to redistribution policy proceed from two basic insights. The first one concerns the empirical regularity that the median of primary endowment distributions falls short of the mean.[1] The majority coalition of voters with a below-average endowment thus have the political power to redistribute income or wealth from the rich to the poor. Notice, however, that without any further restrictions on the rules of the redistribution game, majority vote outcomes are not stable, i.e. they do not represent equilibrium outcomes. The generic simple majority voting game of redistribution

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[1] Because both income and wealth distributions are positively skewed, most redistribution theories do not distinguish rigorously between redistribution of income and wealth.

produces cyclical majorities. This immediately leads to the second basic insight: to arrive at equilibrium solutions, one needs to provide the redistribution game with some additional structure that imposes some kind of restriction. These restrictions are often constitutional provisions that cannot be changed in the course of the ongoing political process.[2]

The simplest constitutional constraint that admits a "structure-induced" equilibrium reduces the menu of feasible redistribution schemes to a proportional tax with rate t and a uniform lump-sum distribution of the tax revenue. Assuming an exogenous primary distribution of endowments, say income, and perfectly selfish voters who only care about their own *disposable* income, the voters' utility can be represented as follows:

$$U_i(t) = U[(1-t)y_i + ty_a],$$

where U has the usual characteristics, y_i denotes voter i's pre-tax income, and y_a average income. Since the voters' preferences are single-peaked ($dU_i/dt = U'(y_a - y_i) \lesseqgtr 0 \ for \ y_i \gtreqless y_a$), the median voter theorem applies. The median voter's utility U_m is increasing in t ($y_m < y_a$), implying that in equilibrium redistribution is complete ($t^* = 1$) and the post-tax distribution of *disposable* income is uniform.

We thus have here a formal *benchmark model* that details conditions that give rise to the counterfactual presumption of full redistribution. These conditions, by the same token, also hint at which kind of modifications are needed to arrive at outcomes that are more in line with the extent of redistribution observed in democracies. Appropriate modifications may concern the underlying economic model, the rules of the political game, and the preferences, beliefs, and attitudes of the voters. We present the respective lines of argument in turn.

2.1 Economics

Large-scale income redistribution and cake-cutting are clearly not one and the same thing. First of all, redistribution policies have *direct feedback effects* on the resources available for redistribution. In our benchmark model, these resources are indicated by the average pre-tax income y_a. Second, the benchmark model does not recognize that redistribution takes place in a dynamic setting in which the income position of individual voters' may change even if the overall distribution remains unaltered. And, third, income redistribution may have *indirect feedback effects* on individual pre-tax incomes by

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[2] Constitutional restrictions usually evolve over time, often incorporate tacit knowledge in the sense of Hayek, and may indeed reflect a quest for stability (see, for example, Artale and Grüner, 2000).

changing the shape but not necessarily the mean y_a of the distribution. We present three representative models that illustrate the respective basic idea of the three provisos.

The mother of all political-economic models of redistribution can be traced back to Romer (1975) and Roberts (1977) and was canonicalized by Meltzer and Richard (1981).[3] The Meltzer and Richard model identifies the *direct feedback effect* of redistribution with a tax-base effect deriving from tax-induced disincentives to work. The crucial consequence of direct feedback effects is that the size of the cake, i.e. the *average income y_a*, varies negatively with the tax rate t: $dy_a/dt < 0$. We thus arrive at our first modification of the utility function:

$$U_i(t) = U[(1-t)y_i(t) + ty_a(t)].$$

In this setup, complete redistribution cannot be an equilibrium because in a world populated with perfectly selfish agents, the tax base would completely disappear if the tax rate approached unity. Not even the poorest voter would advocate such a policy. A second characteristic of the model's behavior is more controversial. The model implies that redistribution varies positively with inequality as measured by the ratio of average to median pre-tax income: $dt/d(y_a/y_m) > 0$.[4]

Labor market distortions are arguably the most important direct feedback effect of redistribution on the tax base. They can be thought of as an "inner emigration" of workers to the realm of leisure. In the age of globalization, tax-induced cross-jurisdictional mobility of labor and capital may yield similar results (Epple and Romano, 1991; Schulze and Ursprung, 1999). Welfare tourism, i.e. *immigration* driven by welfare benefits, may also restrict the extent of redistribution because poor immigrants receive transfers but do not have the right to vote; immigration therefore does not change the median voter's income (Magni-Berton, 2014).

Even if one accepted cake cutting as an adequate representation of the economic ramifications of redistribution, the benchmark model still blanks out *dynamic effects* that are liable to restrict redistribution. Prominent among these dynamic effects is social mobility. Individuals who would benefit from income redistribution in the short run may nevertheless vote against it because they believe that they or their children have a fair chance of moving up on the income ladder in the future. The argument of the so-called "prospect of upward mobility" (POUM) hypothesis rests on the

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[3] The Meltzer and Richards (1981) model extends the models by Romer (1975) and Roberts (1977) by endogenizing government spending.

[4] In a follow-up study that appeared 34 years after their truly seminal contribution, Meltzer and Richard (2015) embed their original model in a growth context. In the modeled labor economy, growth depends on learning by doing. In such a setting, technological specialization can induce a spread in the distribution of innate productivities. As in the original model, this increase in fundamental heterogeneity gives rise to increased redistribution.

assumption that redistribution policies are sufficiently persistent. In a two-period model, the utility function of a far-sighted voter i can be written as

$$U_i(t) = U[(1-t)y_{i1} + ty_a] + \delta EU[(1-t)\tilde{y}_{i2} + ty_a],$$

where δ is a discount factor, the first-period income y_{i1} is given, and the second-period income $\tilde{y}_{i2} = g(y_{i1})$ is stochastic. Policy persistence is modeled with a constant tax rate t, which is voted upon in the first period. In order to focus on social mobility, a steady state income distribution is assumed, i.e. the average income y_a is also constant.

In this specification of the model, prospects of upward mobility clearly render poor voters less inclined to vote for extensive redistribution since they now can end up with an above average income in the second period; rich voters, on the other hand, may become more inclined to support some redistribution because in a steady state, prospects of upwards mobility also imply prospects of downward mobility. To be sure, if all voters face exactly the same income prospects in the second period (in this special case the stochastic transition function g is independent of the primary income y_{i1}), the full redistribution result survives because a majority still prefers this policy in the first period and behind the veil of uncertainty everybody prefers for the second period complete social insurance to being exposed to the social mobility gamble. Behind an opaque veil of uncertainty as portrayed by the stochastic transition function $g(y_{i1})$, voting may, however, result in an equilibrium tax rate $t < 1$. Clearly, the discount factor δ needs to be sufficiently large for the future to matter enough and the voters' risk aversion needs to be sufficiently small to limit the demand for social insurance via redistribution. Bénabou and Ok (2001) show that the crucial requirement concerns the income mobility process: the transition function g needs to be stochastically increasing and sufficiently convex. Social mobility can therefore explain why rational voters may settle for limited redistribution in our benchmark setting even if no other contributing factors, such as labor market distortions, play any role.[5]

Indirect feedback effects of redistribution work through the change of the *shape of the (post-tax) endowment distribution*. Let $F(t)$ indicate the shape of the post-tax endowment distribution. $F(t)$ can either influence the individual endowments y_i (income or wealth), or societal concerns related to a persons' position in the income hierarchy. Indirect *endowment effects* are portrayed by an additional endowment term $h(F(t))$, indirect effects on *societal concerns* by a second argument in the voters' utility functions:

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[5] This basic result relies in a profound manner on the restrictive menu of admitted redistribution policies. Danziger and Ursprung (2001) show, for example, that in a model with three income classes and no restrictions on redistribution, prospects of upward mobility may still limit expropriative taxation but only when the assumed transition probabilities are inconsistent with order-preserving redistribution.

$$U_i(t) = U[(1-t)y_i + ty_a(t) + h(F(t)), F(t)]$$

Zink (2005) presents a model in which no *direct tax-base effect* materializes ($dy_a/dt = 0$); the behavior of the model is driven exclusively by an indirect *wealth effect* $h(F(t))$ (y now denotes wealth and $U_2 = 0$). The model builds on Perotti (1993) and considers three classes of agents.[6] The upper class inherits wealth y_h, the middle class y_m, and the lower class y_l. After having voted on the tax rate t, wealth is redistributed and the agents decide whether to invest in education, become skilled workers who earn a high income, or to refrain from education, remain unskilled, and earn a low income. Wealth can also be invested in the capital market; loans are available, but the level of indebtedness is limited. It is assumed that the middle class can finance education, whereas the poor cannot, unless wealth redistribution is sufficiently high. Adding to these ingredients a standard competitive labor market gives rise to single-peaked utility functions of the poor ($dU_l/dt > 0$) and the rich ($dU_h/dt < 0$). If the median voter is a member of the middle class, the preferred tax rate of the middle class will be implemented. The optimal redistribution policy of the middle class maximizes the wealth-tax rate t subject to the condition that it does not exceed the critical level that would allow the masses to become educated. An intermediate tax rate ($0 < t < 1$) may thus emerge even though the median voter is poorer than the average. This is so because the median voter's labor market rent that results from excluding the poor from higher education may be higher than the increase in wealth resulting from full redistribution.[7]

An early model that portrays an indirect feedback effect of redistribution on *societal concerns* ($U_2 \neq 0$) is Corneo and Grüner (2000). Again, the population is divided into three wealth classes; here, however, class differences indicate not only differences in wealth but also differences in social attributes: the average "social value" ($h > m > l$) in each class correlates with wealth ($y_h > y_m > y_l$). The agents' utility derived from social interaction can be assumed to depend on the quality of their immediate social environment that ranges from their spouses, people living in their neighborhood, to fellow cub members and hotel guests. The Corneo and Grüner (2000) model uses spouse matching as an example. Wealth and social value are assumed to be private information, consumption can however be observed and thus serves as a signal of social value. Redistributing wealth in such a setting dilutes the informational content of the social value signal and may thereby reduce, in particular for the pivotal members of the middle class, total utility from redistribution if the indirect effect associated

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[6] In a more thoroughly fleshed out model with a continuous wealth distribution, Harms and Zink (2003b) present similar results.

[7] In a similar setting, Bourguignon and Verdier (2000) identify circumstances under which the rich *subsidize* the education of the poor. Grüner and Schils (2007) describe an indirect endowment effect that does not work through investment in education but through investment in physical capital. They detail conditions under which the interest rates vary positively with the wealth of the rich investors. Under these conditions, redistribution may make middle class lenders worse off, which would explain why they side with the rich and vote for limited redistribution.

with the second argument in the utility function outweighs the direct effect associated with the first argument (in which $h = 0$).

2.3 Politics

So far we have focused on direct democratic institutions constrained by a constitutional provision that only allows proportional taxes and a uniform distribution of the tax revenue. Now we relax these constraints and consider richer strategy sets of the political game, continue, however, to assume perfectly selfish voters.

To begin with, we retain the assumption of direct democracy, but instead of imposing proportional taxation, we now allow a larger set of tax schedules which, however, still need to preserve the (weak) rank order of pre- and post-redistribution incomes. In addition, we now acknowledge that governments provide not only private goods or transfers, but also public goods G. The benchmark utility function is thus modified as follows:

$$U_i(t) = U\left[(1 - t_i(y_i))y_i + \frac{\alpha}{n}\Sigma t_i(y_i)y_i, G = (1 - \alpha)\Sigma t_i(y_i)y_i\right],$$

where n denotes the number of agents and $\alpha \epsilon[0,1]$. This is the setting used in Breyer and Ursprung (1998) to investigate whether the rich are in a position to forge a coalition with the middle class to avoid full redistribution to the mean. Notice, that this is a much humbler objective than to establish the often heard claim that the predominance of the rich constitutes, as it were, an equilibrium feature of democracy.[8]

It is easy to see that in the standard proportional tax regime ($t_i = t$), non-confiscatory tax rates ($t < 1$) emerge when the constitution prohibits governments to provide private goods and transfers ($\alpha = 0$). Such a "public-good state" constitution would, however, not find a simple majority at the constitutional stage against the "welfare state" constitution that allows the government to provide private goods or transfers ($\alpha > 0$). A constitutional provision that would have the support of a majority is the "redistributive state" that prohibits the government to provide private goods, but allows income-dependent transfers and a progressive income tax with two tax rates. In such a constitutional environment, the rich, who earn an above-average income $y > y_a$, are in a position to

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[8] Clearly, multidimensionality of general redistribution schemes combined with perfect information engenders majority cycles. Alternative political scenarios may, however, admit equilibrium solutions even if the available redistribution schemes, such as progressive income-taxation and the provision of public goods, are multidimensional policies (Roemer 1999, De Donder and Hindriks 2003, De Donder et al. 2012, Bellani and Scervini 2015, Bierbrauer and Boyer 2016).

win over the members of the narrowly defined middle class whose members earn incomes between the median and the mean ($y_m < y < y_a$), by providing the middle class with transfers that supplement their incomes to the average y_a. This compensating transfer can be financed by the proportional surtax on above average incomes, and the provision of the public good is financed by the general proportional tax. The constitution of the "redistributive state" dominates the "welfare state" constitution because the coalition of the upper and the middle class are after the transfer all "above average" and thus vote for the general tax rate that allows the government to produce the public good to the extent desired by the voter with the average post-transfer income; and the surtax levied on the rich is affordable in the sense that it leaves the rich still better off than the average.

To be sure, cash transfers to middle-income earners are not exactly common. The question therefore arises as to whether one can do without the constitutional admission of income-dependent transfers (in particular to the middle class). The answer is in the affirmative. Let the constitution of a "social public good state" prohibit the government to provide transfers and the private good, but allow an income tax with a rate t for incomes below a critical level y' and a tax rate $t + \tau$ for incomes exceeding y', where y' and the maximum surtax rate τ are determined at the constitutional stage. Breyer and Ursprung (1998) show that under these constitutional provisions, i.e. even if transfers from the rich to the middle class are politically infeasible, tax progressivity may bring harmony of interest among all above-median income earners. Full redistribution can be avoided because the rich are able to bring the middle class over to their side with an additional supply of public goods financed by the surtax.

This result is reminiscent of what Stigler (1970) called "Director's law". When redistribution is made in kind by public goods, Director's law claims that these goods, even though financed in considerable part by the poor and the rich, primarily benefit the middle class. In unidimensional spatial models, the empirical phenomenon described by Director's law can be substantiated theoretically. Epple and Romano (1996) present a model in which only one good, education, is publicly provided and financed by a proportional income tax. Preferences over tax-rates are not single-peaked because private education is also available. Epple and Romano (1996) identify conditions under which "ends against the middle" simple majority vote equilibria emerge, i.e. equilibria that are compatible with Director's law.

We now return to our standard unidimensional redistribution policy, but assume that redistribution policy is determined by the institutions of a *representative democracy*. Whereas in direct democracies voters decide on individual policy issues separately, under representative democracy, voters are called upon voting on policy bundles in the form of multi-dimensional party platforms of which redistribution is just one item. Of course, majority voting in a multi-dimensional policy space does, in general, not admit equilibria. To resolve this indeterminacy, multidimensional spatial models of electoral

competition need to assume some kind of uncertainty. The most commonly used approach, *probabilistic voting*, assumes that the political parties know the *economic* interests of the voters but are incompletely informed about the voters' *communitarian ideology* which represent a second policy dimension. Communitarian ideologies comprise in particular identity-fostering attitudes such as nationalism or religiosity. Following the pioneering contribution by Lindbeck and Weibull (1987), voter i with the communitarian ideology c_i now has a utility function of the following form:

$$U_i(t) = U[(1 - t)y_i + ty_a, c_i].$$

The political part of the model portrays an election contest of two parties (R and L) competing for office. The parties are assumed to be opportunistic, i.e. they maximize the probability of winning by (credibly and simultaneously) announcing their respective redistribution policy t_R and t_L, but they have inherited their parties' ideologies on the communitarian dimension c. The ideologies ($c_R > c_L$) are thus given and not choice variables of the parties.[9] In the usual textbook representation,[10] the voters are grouped in three classes $j = h, m, l$ with incomes $y_h > y_m > y_l$ and class size α_j. In each class, the voters' ideologies are uniformly distributed around the midpoint between c_R and c_L. The crucial point is that the length d_j of the support of the c_i-distributions is group-specific. Uncertainty is introduced into the model by assuming that a random shock δ may shift the supports of the group-specific c_i-distributions to the right or left: in the textbook version, δ is assumed to be also uniformly distributed (around $\delta = 0$).[11] At the time of writing, a topical example for such a shock would be a pro-nationalist shift of the French electorate in response to the terrorist attacks by Islamic fundamentalists. The party platforms are announced before the δ-shock hits the electorate.

For additive utility functions, $U_i^K(t) = U((1 - t_K)y_i + t_K y_a) - (c_i - c_K)^2$ ($K = L, R$), it is easy to show that in equilibrium both parties make the same policy pronouncement t^* which corresponds to the *political support maximizing* policy. Political support is a weighted average of the economic welfare of the three classes, the weights being the product of class size α_J and the density $1/d_j$ of the group-specific distribution of communitarian ideologies. If the upper class is more homogenous in terms of communitarian ideologies than the middle and lower classes, i.e. d_h is smaller than d_m and d_l, less than full redistribution ($t^* < 1$) may emerge in equilibrium.

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[9] Roemer (1998) also presents a two-dimensional model of electoral competition, but in Roemer's model the two parties are "principled" (i.e. they have policy preferences) and can choose their stance on the communitarian issue (religion). Using an equilibrium concept that is based on the portrayed intra-party struggle over policies, Roemer shows that it is possible that the party representing the poor proposes moderate redistribution – and this moderation increases with increasing salience of the religious dimension of politics. As in the standard probabilistic voting models, the result is due to the fact that in representative democracies policy platforms cannot be unbundled.

[10] See, for example, Persson and Tabellini (2000), 52-58.

[11] The support of the δ-distribution is assumed to be sufficiently large to rule out corner solutions.

More recently, Bellani and Scervini (2015) provide an alternative way to tackle the indeterminacy in a setting in which there is multidimensionality in both the policy space (amount and type of public goods provided) and in the individuals' types (income and preferences over a bundle of public goods). They investigate a set up in which the total budget devoted to the production of public goods is decided through majority voting at one level of government, e.g. the state, while the types of public goods provided is still uncertain as it will be decided in a second step by a different authority, e.g. the municipality. In this framework they show that the equilibrium quantity of in-kind redistribution depends both on the dispersion of voters' income and on their preferences over the type of good to be provided.

Do institutions of democratic governance advantage the rich and impede large-scale redistribution? We have shown that in direct democracies the economically powerful are certainly in a position to bribe the middle class to abandon the idea of confiscatory taxation. This may even be true if the constitution only allows "bribes" in the form of pure public goods. In representative democracies, on the other hand, the upper class may escape expropriation because of its ideological homogeneity and moderation which turns upper class voters into swing voters par excellence: they care much more for the parties' redistribution policy pronouncements than for the communitarian values touted by the parties. The members of the lower classes are more heterogeneous and thus more prone to espouse radical ideologies with the attendant greater partisan attachment. It is thus the higher significance placed on the trade-off between economic policy and partisan attachment that may weaken the political power of the lower classes. This gives rise to the question as where this salience of communitarian issues comes from. Marx's dictum of *the opiate of the masses* springs to mind: can the rich artificially increase the salience of communitarian issues that are basically inconsequential, can they create a *false consciousness*?

Various studies have added political propaganda to the work-horse model of probabilistic voting. Campaigning can, for example, affect the relative salience of the communitarian dimension of politics as compared to the economic dimension, or it can shift the entire support of the group-specific c_i-distributions. Campaign outlays are usually thought to be financed by interest groups that either base their contributions on the political parties' platforms (Hillman and Ursprung 1988), or the Stackelberg relationship is reversed and the interest groups offer the parties contributions in return for specific polices (Grossman and Helpman 1994). This modeling approach is however not well suited to explain general interest issues such as large-scale redistribution, it is much better suited to explain policies that are of special importance for specific interest groups. Moreover, this approach ignores the fact that political attitudes are mainly shaped by the media scene that is driven by its own internal dynamics. Exploring the influence exerted by the media on redistribution policy is a fascinating, albeit neglected field in public choice.

To be sure, attitudes towards communitarian values need not be a product of campaigning or media influence. Communitarian attitudes may be formed spontaneously in social environments that are not limited to the political sphere. This leads us immediately to models that explain observed patterns of redistribution with the help of preferences, beliefs, and personal attitudes.

2.4 Preferences, beliefs, and attitudes

Assuming narrowly selfish political agents goes far beyond the traditional economic premise of rationality. However, when explaining observed redistribution policies, the presumption of selfishness is, a priori, not unreasonable because by simply adding a requisite taste or distaste for redistribution, one can always explain away remaining deviations from some theoretical predictions; and because this is always possible, it is not very enlightening. The charge of arbitrariness and adhocism does however not apply if the involved type of other-regarding preferences is well established in behavioral research, or if the proposed theory explains how these preferences emerge endogenously, for example, as an adaptive feature of an evolutionary process. Using as a starting point again the stylized Meltzer and Richard (1981) model, other-regarding preferences are usually portrayed by an additional (additive) term V in the utility function:

$$U_i(t) = U[(1-t)y_i(t) + ty_a(t)] + V(y_{-i}).$$

Dixit and Londregan (1998) identify in their probabilistic voting model the communitarian dimension, now portrayed by V, with a left-right ideology that consists of a weighted average of deviations from an egalitarian distribution and a distribution that grants all individuals the fruits of their productivity. Galasso (2003) introduces voters with a Rawlsian type of "advantageous" inequality aversion in the Meltzer Richard (1981) model by setting $V(y_{-i}) = -\beta\big((1-t)(y_i - y_{min})\big)$, where y_{min} denotes the income of the poorest agent and β measures inequality aversion. Borck (2007) captures both advantageous and disadvantageous inequality aversion by using instead a standard Fehr-Schmidt utility function. Not surprisingly, inequality aversion increases redistribution; more interestingly, with inequality aversion the extent of income redistribution no longer depends only on the ratio of mean and median income because changes in the distribution of incomes now also influence the *perception* of inequity.

Another well-established behavioral trait is that property rights to earned incomes are psychologically more firmly fixed than property rights to bestowed income which many voters deem to lack desert and therefore justify redistribution. Using this distinction, Alesina and Angeletos (2005) present a model that admits multiple equilibria, a low-redistribution (US-style) and a high-redistribution (European-style) equilibrium. The stability of the equilibria derives from the argument that in a low-

tax regime with attendant low-scale redistribution, agents exert a great deal of work effort. Since the agents are assumed to be heterogeneous in their earning abilities, the high work effort translates into a large part of the income differences being due to effort, which, in turn, implies that the median voter demands low taxes and little redistribution. The converse holds in high-tax regimes.[12]

Related to this tale of two equilibria are models that recognize that voters may hold different *beliefs* about how the economy works. For consistency reasons, these beliefs are modeled as equilibria of learning processes. Marx, of course, already famously claimed that beliefs, for example *false consciousness*, always have an economic foundation. In the line of this tradition, Piketty (1995) proposed a model in which dynastic histories of intergenerational mobility form agents' beliefs about the incentive cost of redistribution. Interestingly, the process of learning from dynastic experience does not necessarily feature an equilibrium in which all agents get to know the true structure of the economy. Equilibria in which poor dynasties believe in low incentive costs and rich dynasties in high incentive costs of redistribution emerge quite naturally in this model and explain why disagreement about the extent of redistribution can coexist even with identical social preferences. Bénabou and Tirole (2006) present a similar model that also explores how perceptions of the relationship between economic success and effort are formed. Whereas in Piketty's 1995 model, false consciousness derives from limited experience, Bénabou and Tirole suggest that the wrong beliefs may be strategically chosen, notably also by poor agents, either to discipline their children or in a conscious act of self-deception. By consciously manipulating beliefs and repressing recollection of reality, beliefs are decoupled from reality. The resulting cognitive dissonance is self-sustaining because widely held overoptimism concerning effort-related economic success reinforces a strong work ethic and lowers the expected tax rate which, in turn, feeds back into strong incentives to believe in effort-induced benefits.

The theme of endogenizing fundamentals has recently been taken up by studies that rely on other-regarding preferences in explaining observed patterns of redistribution. Cervellati et al. (2010), for example, endogenize preferences in a model with two types of agents, skilled (s) and unskilled (u), by setting $V(y_{-i}) = \sigma_u U(y_u, t) + \pi \sigma_s U(y_s, t)$, where $\pi < 1/2$ is the share of the skilled population; V is thus a weighted sum of the private utilities. The weights depend on how much the observed labor supply L_u and L_s deviates from a social norm of work ethic which is taken to be the average labor

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[12] Alesina et al. (2012) revisit the issue of "fair" acquisition in a model that links generations of voters by bequests and portrays policy making with the help of probabilistic voting instead of simple majority voting. These changes allow to compare income and bequest taxation. Lindbeck and Weibull (1999) also present a similar model that does, however, not rely on social preferences but rather on a social norm that stigmatizes living on public support. The stigmatizing effect is assumed to vary negatively with the population share on the dole. This setup results either in a low-redistribution equilibrium supported by the working population or in a high-redistribution equilibrium supported by the transfer recipients.

supply L_a in the society: $\sigma_u = L_u/L_a$ and $\sigma_s = L_s/L_a$. The feedback from labor supply L_u and L_s to social sentiments as measured by σ_u and σ_s is modeled as a discrete-time adjustment process. The social norm also manifests itself in a second feedback effect: self-esteem φ_i, which is a component of private utility $U[(1-t)y_i(t) + ty_a(t), \varphi_i]$, increases (decreases) if the individual labor supply exceeds (falls short of) the social norm. The political-economic equilibrium in which the work norm, labor supplies, and taxes are mutually compatible, is determined by the tax preferences of the unskilled workers who constitute the majority. Two types of equilibria may emerge. In a *cohesive equilibrium*, everybody conforms to the social norm and voters are relatively supportive of redistribution because poverty derives from limited abilities and not from laziness. In a *clustered equilibrium*, the unskilled are less industrious than the skilled, are therefore seen to be poor by choice which reduces voter support for redistribution.

Whereas Cervellati et al. (2010) assume other-regarding preferences to be universal, Shayo (2009) acknowledges that different social groups with distinct social preferences usually coexist. Identification with a group is assumed to mean that an agent internalizes that group's core interests. Shayo's main contribution consists of edogenizing group identification. Individuals are characterized by certain attributes and identify with that group whose mean attributes across members correspond best to their own. Given their identities in terms of other-regarding preferences, i.e. group-specific interests, individuals i identifying with group g_i maximize their utility which includes the term $V(S_{g_i}(t), d_{g_i}(t))$, where S_{g_i} denotes the status of group g_i and d_{g_i} the attachment (distance) of i to group g_i. The utility maximizing choices of the voters are aggregated by simple majority voting. The chosen tax-cum-redistribution policy t influences group status and individual group attachment, and thereby the pattern of social identities. Shayo's 2009 model distinguishes three social groups: the lower class, the upper class, and the nationalists. It turns out that poor voters are more likely to identify themselves as nationalists than rich voters, which reduces support for redistribution.

All of these modeling approaches, whether they make use of traits identified by social psychology, try to get to the bottom of belief formation or formation of other-regarding preferences, have contributed to our understanding of how redistribution policies come about. However, they still lack a cohesive foundation. How do beliefs and preferences, other-regarding or not, emerge endogenously? In other words, are they evolutionarily adaptive, in some sense fitness-improving, in the economic environment that they co-create? Since redistribution policy, widely defined, is such an encompassing issue, these questions immediately arise. Shayo (2009), by making social identity a matter of individual choice, goes furthest in this respect, but much exciting work still remains to be done.

When it comes to gratifying one's cravings for social inclusion, establishing and expressing a fitting social identity is a vital matter. The political discourse offers ample opportunities to achieve these

primordial needs. People can, for example, establish and signal an identity of civic responsibility by the mere act of participating in elections and referenda (Funk 2010), or by expressing political views that improve their acceptance in a sought-after social group (Hillman 2010). Voters whose motives are purely expressive do not vote instrumentally, i.e. they do not attempt bringing to pass a desired policy outcome; they rather derive utility directly from the *acts* of participating, voting for specific proposals, and engaging in expressive rhetoric. This expressive utility can derive from an internalized perception of civic duty that provides a "warm-glow" (Andreoni 1989, 1990), or from a willful misrepresentation of the voter's true preferences in an attempt to express a socially acceptable personality. In either case, if the probability of being pivotal is miniscule (as is always the case when it comes to deciding on large-scale redistribution), the term U that portrays the voter's narrow self-interest in the utility function becomes less weighty; in the extreme, we are left with the term V that now portrays the voter's *expressive utility* which is *other-regarding* only in the sense that it captures the voter's selfish utility from how he or she is regarded by others (or by him- or herself):

$$U_i(t) = V(b),$$

where b denotes the voter's behavior.

The usual conjecture is that expressive motives prompt voters to change their voting behavior in such a way as to bring it in accordance with high ethical standards. In his seminal contribution, Gordon Tullock (1971) paraphrased this strategic change of heart as *"charity of the uncharitable"*. If redistribution is a generally accepted social imperative, expressiveness prompts the median voter for two reasons to demand more redistribution. First, the trade-off between group conformity and self-interest shifts in favor of conformity and, second, the identity of the median voter changes because only those voters will go to the poll whose expressive utility V exceeds the cost of participation. The effect of an improved ethical voting behavior hinges, of course, on the presumption of a social environment in which the predominant groups indeed advocate high ethical standards. Unfortunately, there is ample (and also recent) historical evidence that this need not to be so. All we can deduce is that expressive voting decouples politics from the economic interests and ties it to sentiments that can be more or less moral (however defined). Because expressive behavior is determined by these identity creating group sentiments, we have no universal indication of the consequences of expressiveness. In the case of redistribution policy, expressive voting can, in principle, result in more or less redistribution. Whether the voters will be happy with their expressive decision, is however unclear. Exactly because the adopted policy becomes decoupled from economic fundamentals, it is perfectly possible that majority decisions are taken that reduce everybody's welfare (Glazer 1992). This is not to say that everything can happen. Just as beliefs, group sentiments are not arbitrary; they emerge in a conducive environment and disappear if they prove to be dysfunctional. Full-fledged positive theories of

expressive voting will therefore have to endogenize the coevolution of group identifiers, i.e. group-specific moral sentiments, and the socio-economic environment that produces material well-being.

3. Empirical evidence

3.1 Preferences for redistribution

Various studies investigate the determinants of individual preferences for redistribution. Corneo and Gruener (2002) use data from the International Social Survey Programme (ISSP), a large international survey covering 12 developed and transition countries. Their analysis reveals that expected net monetary gains are an important determinant of preferences for redistribution but two other competing determinants also play a major role: the "public values effect" that describes the individuals' social norms and values and the "social rivalry effect" that describes the individuals' concern about their relative position in society.

Heterogeneity in ethnicity, education, employment, and status are also important determinants of preferences for redistribution. A comprehensive theoretical and empirical survey of these determinants is due to Alesina and Giuliano (2010). This survey also includes new empirical results on how US Americans appraise government programs that attempt to ensure that everyone is provided for. The US data comes from the General Social Survey (GSS); additional cross-country evidence uses data from the World Value Survey (WVS). For the US, the findings are in line with the previous literature: richer people are less in favor of redistribution, an increase of a standard deviation in income is associated with a decrease of 10% of the standard deviation of preferences for redistribution. The authors also show that even after controlling for income, individuals that are more educated are more averse to redistribution. Women are more pro-redistribution than men, the effect of gender is however much smaller than the effect of race. In fact, even after controlling for income, marital status, employment status, education, and age, blacks favor redistribution much more than withes (17% of the standard deviation of preferences for redistribution). The cross-country analysis based on the World Value Survey data broadly confirm the results on the US. Women, youths, the unemployed, and left wing people are more pro redistribution. Income and education reduce the desire for redistribution, but education has a positive effect on redistribution when interacted with political ideology.

Instead of investigating individual preferences, Zoutman et al. (2016) measure the redistributive preferences of political parties. For each party in the Netherlands they calculate "social welfare weights" implicitly assigned to all income groups. Their findings show that all political parties give a

higher social weight to the poor than to the rich, and left-wing parties generally give a higher social weight to the poor and a lower social weight to the rich than right-wing parties do. However, all parties give a higher social welfare weight to the middle class than to the poor, which indicates that advocating the median voter's preferences may well be a political support maximizing strategy.

3.2 The Meltzer Richard model and its derivatives

We now move from individual and party preferences to observed policies. The Meltzer and Richard (1981) model predicts that increasing inequality (defined as the ratio of mean and median income) gives rise to more redistribution. The empirical evidence on this issue is at best mixed. Milanovic (2000), using individual income data from harmonized household budget surveys (Luxembourg Income Study), provides a first empirical test of this prediction. He focuses on the link between inequality in factor incomes (pre-tax and transfer) and the gain in income share of the below-average income earners. The results strongly support the conclusion that countries with larger pre-tax inequality redistribute more to the poor. The evidence on whether the median-voter is indeed decisive is however considerably weaker. Milanovic shows that lower factor-income shares of the middle class are only associated with redistribution gains when pensions are counted as transfers. When pensions are excluded, i.e. when the focus is on explicit redistributive social transfers (e.g. unemployment benefits, social assistance, and family allowances), the middle class gains little. More recently, Scervini (2012) extended the work by Milanovic (2000) by relying on a larger sample of 24 countries from 1967 to 2006, including a wider set of political and economic controls, and by analyzing in more detail the role of all income deciles. His findings confirm a positive correlation between income inequality (measured by the Gini coefficient) and redistribution (measured by the Reynolds-Smolensky index). The results are however rather mixed with respect to the median voter hypothesis: Scervini finds no statistical differences between democratic and non-democratic countries, the correlation between income and net transfer shares is at a minimum for the middle class, and the amount of net transfers received by the middle class decreases with the distance between the top decile and the middle quintile. All these results go against the grain if one believes in the mechanisms described by Meltzer Richard type models.

A related strand of literature examines, beside the role of income differences, a second source of voter heterogeneity in determining the extent of income redistribution and/or the provision of public goods, namely ethnic and linguistic differences. Since the first influential survey by Alesina and La Ferrara (2005a), this literature has grown substantially. The general findings of these contributions is that higher ethno-linguistic (or/and religious) diversity is associated with a lower support for public

spending and redistribution (Banerjee et al., 2005; Miguel and Gugerty, 2005; Desmet et al., 2009; Alesina and Zhuravskaya, 2011). Among the most recent contributions, Bellani and Scervini (2015), provide also some empirical evidence on the link between fractionalization and in-kind redistribution, showing, with data from the US Census, that more fragmented societies have, as a rule, lower public budgets when controlling for income inequality, while income inequality tends to increase public budgets when controlling for social fractionalization. The basic intuition for this result is that individuals with below-average incomes support redistribution more than richer individuals, but all individuals, independently of their income levels, are less inclined to support taxation if they anticipate that a substantial part of the public budget is going to be spent on goods and services which they do not really care for. If social fractionalization implies a higher heterogeneity in preferences, then the support for taxation and public spending is likely to be lower in societies with higher levels of fractionalization.

Stichnoth and Van der Straeten (2013) provide the most recent review of the empirical literature on the effects of ethnic fractionalization on redistribution. They focus on the issue of causality and thus on studies relying on controlled experiments or natural experiments. Habyarimana et al. (2007) conducted controlled experiments in several slums of Kampala, Uganda. The results show that preferences for various public goods do not differ significantly across ethnic groups, and neither do preferences on how these public goods should be distributed. Letting the subjects play a dictator game, the authors do not find evidence that subjects are less altruistic towards members of other ethnic groups. Fong and Luttmer (2009) investigate the role of racial group loyalty on charity giving in a sample of adult US residents. They use audiovisual presentations to manipulate beliefs about race, income, and worthiness of Hurricane Katrina victims and again find no influence of victims' race on the amount the subjects are donating on average. However, respondents who strongly identify with their own racial or ethnic group give substantially more when victims are of the same race, while respondents who do not feel close to their group give substantially less. Gerdes and Wadensjo (2010) and Gerdes (2011) exploit the regional variation in ethnic composition in Denmark which changed exogenously by refugee placement programs. Neither study finds a systematic effects of immigration public sector size or on the support of political parties that are in favor of a generous welfare state. More recently, Freier et al. (2016) empirically test the hypothesis that population diversity impairs redistributive public policies by exploiting the exogenous change in religious diversity that resulted from German reunification. They find that increasing religious diversity leads to a significantly slower increase in per capita public spending.

The classical Meltzer Richard model presumes that all voters know the shape of the income distribution and their own position in this distribution. Challenging this assumption, Cruces et al. (2013) designed

a representative survey of 1100 households in Greater Buenos Aires and found systematic biases in individuals' evaluations of their own relative position in the income distribution. An experiment that was part of their survey moreover indicates that having accurate information about the income distribution might induce agents to better calibrate their demands for redistribution. In particular, those who had overestimated their relative position tend to adjust their demand for redistribution to higher levels when informed of their true ranking.

3.3 Prospects of upward mobility

The empirical evidence concerning the influence of prospects of upward mobility on redistribution is largely consistent. Alesina and La Ferrara (2005b) use panel data to construct for different categories of individuals an objective measure of expected gains and losses from redistribution. They find that people's preferences for redistribution are in line with their beliefs about what determines one's position in the social hierarchy. Moreover, they find that, ceteris paribus, people who believe that the society offers equal opportunities are less in favor of redistribution.

Checchi and Filippin (2004) test the POUM hypothesis by means of a controlled within-subjects experiment in which the concavity of the mobility process, the degree of social mobility, information about the subject's current income, and the degree of inequality are used as treatments. Other determinants of the demand for redistribution, such as risk aversion and inequality aversion are (partially) controlled for with the help of the design of the experiment or with information collected during the experiment. The results provide support for the POUM hypothesis, showing that preferred tax rates robustly decline when prospects of upward mobility are present.

Alesina and Giuliano (2010) use data from the US General Social Survey to estimate the correlation between preferences for redistribution and proxies for prospects of upward mobility such as the education of the father, the income of the family when the respondent was 16, and two different measures of social mobility, one based on differences in the years of education between the individual and his/her father, the other is defined as a dummy indicating whether the occupational prestige of the individual is greater than the occupational prestige of his/her father. The results show that having a highly educated father reduces the desire for redistribution; the same is true for enjoying a high income during youth. Social mobility appears to decrease preferences for redistribution, but only when measured by occupational prestige. The effect of the father's education is smaller than the effect of the individual's own education. An individual whose father is a high school graduate prefers less redistribution than an individual whose father has no high-school degree; the difference is in the order

of 4% of a standard deviation of preferences for redistribution. The effect of family income at 16 is similar (an increase by a standard deviation in family income at 16 is associated with an increase in preferences for redistribution of 4% of a standard deviation). A one standard deviation increase in social mobility decreases preferences for redistribution by about 3%. Using data from the German Socio-Economic Panel, Rainer and Siedler (2008) also find a negative relation between self-reported expectations of occupational mobility and preferences for redistribution.

3.4 The political power of the rich

Is there any empirical evidence supporting the claim that the political influence of the rich is much larger than indicated by their vote share? Potters and Sloof (1996) provide the first survey on the empirical relevance of special interest groups on political decision-making. They find the following general consensus results: i) campaign contributions and lobbying change the voting behavior of the legislators, particularly in votes on bills with a narrow focus and low public visibility; ii) the larger the organized membership of an interest group, the larger its political influence, and iii) strong lobbying pressure in the presence of a well-informed electorate lowers the influence of special interest groups. These conditions under which special interests (be they interests of the rich or others) can successfully contest government favors appear to be often satisfied. Of particular relevance for our question is however under which conditions general interest policy outcomes are closer to the preferences of the rich than to the preferences of the poor majority. Bandiera and Levy (2011) hypothesize that that the wealthy elites' influence on policy choices is especially strong when politicians belonging to different groups face a poor majority that is characterized by diversified preferences. They show that the pattern of public good provision by local governments in Indonesia is consistent with this intuition.

A more direct, albeit illegal, strategy to transform economic into political power is to buy votes. Balafoutas (2011) investigates how, in a corrupt political system, rich voters can block redistribution by buying the votes of poor voters. Two sources of government corruption are modeled: first, the government appropriates part of the tax revenue that is meant to be redistributed to the poor, and, second, the rich can bribe the government to set the effective tax rate below the statutory rate that emerges from an election contest. In equilibrium, the effective tax rate, and thus redistribution, varies negatively with corruption. Using cross country data on both democratic and non-democratic countries, it is then shown that tax rates indeed decrease with increasing corruption. This is, of course, not a conclusive test of the proposed negative effect of vote buying on redistribution; it only shows that one testable implication of this model is not obscenely at variance with the empirical evidence.

As a matter of fact, the effects of vote-buying on the real economy have, so far, not been studied in great depth. Most studies investigate the social determinants of vote buying. It is, however, obvious that votes are bought from poor voters by people from the higher strata of society with the intention to bring about policies, not least redistribution policies, that suit the buyers better than the policies they would have to expect without their illegal dealings. A possibly less costly but just as illegal complementary strategy is to intimidate voters. Aidt et al. (2011) find, for example, that Indian political parties are more likely to nominate alleged criminal candidates in parliamentary constituencies whose populations exhibit lower levels of literacy (approximately a quarter of the members of India's lower house of parliament elected in 2004 and in 2009 faced or have previously faced criminal charges), and interpret the parties' decisions to nominate known criminals as an attempt to use these candidates' capacity to intimidate voters. To substantiate this claim, they show that criminal candidates reduce electoral turnout.

Limited redistribution in democracies may, finally, also be a legacy from the non-democratic past. Acemoglu and Robinson (2008), for example, argue that even when the poor are enfranchised, they still do not profit from more redistribution because those who see their "de jure" power eroded by democratization may sufficiently increase their investments in "de facto" power in order to be in continued control of the political process via lobbying or by establishing in the pre-democratic regime a large and powerful state bureaucracy that favors continued patronage and thereby perpetuates an inefficient state structure (Acemoglu et al. 2011). A number of studies present empirical evidence consistent with this argument, among the most recent is Albertus and Menaldo (2014) who show in a global cross-country panel study that redistribution is more limited if the elites were strong during the transition to democracy and if the new democracy operates under a constitution written by the outgoing political elites.

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