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**Macrojustice from equal liberty:
The normative economics of optimum income taxation and distribution***

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“Economic theory is plainly indispensable in determining the more definite features of the practice, but what is essential is to understand the problem against the appropriate philosophical backgrounds.”

John Rawls, *Social Unity and Primary Goods* (1982).

“First think, then compute.”
A teacher of mathematics.

Abstract

Unanimous actual practical opinion, reflective philosophy, and our basic social rule, seem to imply that overall distributive justice, and notably the proper income tax, are not to be defined from the maximization of a social welfare function of individual utilities. Rather, society should certainly respect the “social freedom” of the basic rights, and secure some kind of efficient equal freedom of choice in domains of choice which are necessarily non-identical. The various ways of specifying this principle lead to the same distributive structure of ELIE – equal labour income equalization –, which also amounts to an equal tax credit (or basic income) financed by an equal labour of all – or by a flat tax exempting overtime labour –; to each individual yielding to each other the proceeds of the same labour; and to a number of other highly meaningful properties. This scheme is incentive-compatible, implies a minimum income, and satisfies realistic no-envy. It applies to multidimensional labour and extends to situations of unemployment. Both its simple structure and the available information favour its practical application. The determination of its degree of distribution, solidarity and community – proper to each society – is discussed.

Keywords: distribution, justice, normative economics, freedom, equality, efficiency, welfare, taxation, transfers, subsidies.

JEL classification numbers: A12, A13, B41, D23, D24, D30, D31, D33, D51, D60, D61, D63, D64, D71, D78, D89, E24, E25, E62, E64, H19, H20, H21, H24, H26, H31, H53, I30, I31, I38, J30, J31, J38, K10, P26.

**This paper is written in honour of Jim Mirrlees, as an offering for his 70th birthday (as Paul Valéry wrote: “On ne s’appuie que sur ce qui résiste”).*

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1. Introduction: Liberty or utility¹

1.1 The place of principles

As we will see, unanimous practical opinion, philosophical analysis, and the basic principles of our liberty-based and democratic societies, all suggest that the proper reference for overall distributive policy in “macrojustice” is not the welfare of individuals but their means and freedoms of choice and action. This paper derives this policy from moral axioms which, it seems, cannot and should not be discarded: “social freedom” which is the meaning of our constitutional basic rights, the equivalent respect of unanimity in Pareto efficiency (necessary in a free and democratic society), and the principles of equal freedom of choice that respect the two previous conditions, i.e., free exchange from an equal notional allocation, and the equal freedom of domains which are generally different.² The resulting structure amounts to a number of highly morally meaningful properties. It means that each person earns according to her merit (as valued by others) from an equal allocation (of income and labour/leisure). The transfers can be more or less intense, but have a definite structure. In particular, they consist of an equal tax credit (rebate) or universal basic income financed by equal labour, or by a flat tax exempting overtime work. This amounts to each person yielding to each other the product of the same labour in a universal balanced reciprocity. It is also an equal sharing of the proceeds of the same given labour, or equal pay for equal partial work. This distributive structure can apply with various intensities and hence amounts of transfers (from none), and the ones retained depend on the degree of community and solidarity of the society in question. This policy induces people to use and reveal their best skills – it is incentive-compatible –, as we will see. It is easily implementable by the routine procedures of estimation of fiscal

¹ I have too many people to thank for their questions and remarks during presentations of these ideas over the years for me to attempt to be fair. Yet, I have to mention John Rawls, Kenneth Arrow, John Harsanyi, Hervé Moulin, William Thomson, Kotaro Suzumura, François Bourguignon, Maurice Salles, Ronald Dworkin, Marc Fleurbaey, Nicolas Gravel, Tony Atkinson, Denis Fougère, Didier Blanchet, Bernard Salanié. My most specific debt, however, is to the participants to the workshop on macrojustice in Marseilles, who presented very interesting papers about the obtained ELIE distributive principle. They are Claude Gamel, Alain Trannoy, Alain Leroux, Erwin Ooghe, Michel Lubrano, Pierre Livet, and Alain Wolfelsperger. The basic result can be found in many publications (Kolm 1966a, 1993b, 1996a, 1996b, 2004a, 2004b, in particular). François Maniquet (1998a, 1998b) deduced, from a set of axioms explicitly using utilities and not liberty, an end-state allocation similar to the individuals’ choices under the obtained simple scheme of income distribution.

² As we will see, identical domains of choice violate both Pareto efficiency and social freedom (with free choice of labour with different individuals capacities).

administrations (even including all relevant dimensions of labour). It extends to the situations of unemployment. In the resulting state, no person prefers any other's allocation and labour that she can have to her own. A minimum income is also implied. This policy is so simple that citizens and politicians not only endorse its axioms but also understand it – a necessary condition for political implementation in a genuine democracy. It can be introduced by reforms, progressively, with everybody gaining at each step from actual situations.

Being derived for overall distributive justice, this policy is perfectly compatible with other proposals about how to support specific needs (the only issue being the range of substitution between these aids and income policy). Yet, it is an alternative to the application, in its field, of other interesting proposals such as the “non-welfarist” ones of Rawls, “classical liberalism” (from Locke to Nozick), Dworkin, etc., or the “welfarist” economists’ “optimum income tax”, and others,³ which, however, have their own important scope of actual relevance (welfare, maximin in self-respect, laissez-faire, etc).

1.2 The scope of welfarism

There are two ways to use a hammer: to crack the nut, and to slightly hit the bell for the ear to detect where the flaw is.⁴ The first use is spectacular in action, but the second may be in conclusion. Maximizing a classical Social Welfare Function of individuals' utilities is the happy and powerful first use. Yet, let us listen. *Nobody thinks – it seems – that someone should pay a higher income tax than someone else because she is more able to enjoy the dollars left to her or less able to enjoy the dollars taken away from her.* These remarks reject equal utility and utilitarianism, respectively, as objectives of the income tax. They clearly mean to reject also mixed and intermediate cases, that is, any attempt to derive an “optimum income tax” from moral criteria based on individuals' capacities to enjoy or “eudemonistic capacities.” We think that our capacity to derive pleasure from our consumption is a psychological subjective and private matter, a part of our private sphere, irrelevant for the public policy of choosing the income tax, and no concern of the fiscal administration's. And, indeed, no questionnaire of the Internal Revenue Service ever tried to inquire about your

³ Including a number of intermediate proposals such as those in Kolm (1966b, 1971, 1993a, 1999b, 2004a Chapter 26), Fleurbaey and Maniquet (1996, 2005a, 2005b, 2005c), and Luttens and Ooghe (2006). The detailed comparison of the obtained scheme with others is to be found in Kolm (2004a, Parts 3, 4 and 5).

⁴ Philosophy's role according to Nietzsche.

degree of dissatisfaction when you are taken ten dollars away (in order to, if you hate this, either take less, or take more because it reveals that you enjoy so much the dollars left). This seems in line with the most basic principles of our democratic constitutional rights and organization: “Men are free and equal in rights” and should be secured the means to “pursue happiness” as they see fit rather than – intrusively – specific levels of happiness (if they could be known). Democracy also requires that unanimous views be applied – *vox populi, vox dei*.⁵ John Rawls says the same thing in his characteristic subtle and deep way: for “social justice,” income distribution should provide right and fair means without consideration of utility, and each of us should be free to derive goodness as she conceives it from and with the means provided by these “primary goods.” Note that intra-family distributive justice or facing propensity to deep depression are other, different issues.

In fact, this general remark about the irrelevance of utility for such policy is probably actually superfluous. No one can fear that this view be violated. Indeed, if this opinion is unanimous, it is in particular held by all people who choose and apply the policy (voters, politicians, administration). Hence they do not apply a policy using a different principle. A theory with a different hypothesis could not be implemented – and none seems to be, actually. Such theories may also not be applied because of the lack of simplicity of their results: policy-makers do not understand the structure and its reason, but if they are explained, they probably disagree.

An irrelevance of eudemonistic capacities for the income tax is, for the economist, both a blessing and the source of a deep and painful regret. On the one hand, it constitutes a blessing of major importance with respect to information and even meaning. If it were not the case, we would have to know, for each individual, her preferences, her utility function meaning pleasure, satisfaction or happiness, in general comparisons of variations of these utilities, and comparisons of these utilities and – in general – of their variations across individuals. These are extraordinary requirements, and the actual meaning of some of these issues is not known (cardinal utilities with this meaning, part of the interpersonal comparisons).⁶ Moreover, utilities would have to be cleansed for anti-social sentiments (envy,

⁵ Hence, this basic reason for self-accountability of eudemonistic capacities for this issue is that it is a unanimous moral opinion. It is not Dworkin’s argument that people would be “responsible for their tastes,” which is largely false –although this is a subtle issue (see Kolm 2004a, pages 94 to 107).

⁶ Kolm 1996a, Chapters 12 and 14.

jealousy, malevolence, spite, *schadenfreude*, sentiment of superiority),⁷ perhaps for pro-social ones (altruism, sense of justice), for expensive tastes that nobody else should finance, probably also for inconsistencies which are sometimes systematic (for instance with time preference, uncertainty, adaptive preferences, etc.), and we would have to choose one of individuals' multiple selves (e.g., should we select the hedonist *id*, the deontic *superego* or the synthetic *ego*?),⁸ while we often do not know how to perform these operations non-arbitrarily – plus the issue of information. Finally, one would have to find a Social Welfare Function of the kind Arrow explains that no good one exists; which one should we choose? And the above-noted common opinion precludes that the political system produces such a function, and implies in fact that everybody opposes the use of any one. At any rate, any welfarist ethic that emphasizes issues of information in some other view is bound to meet a remark about straws and beams in eyes.

On the other hand, the noted general simple moral opinion has to face the beauty of elaborate theories such as that of James Mirrlees (1971, 1986), which derive an optimum income tax from the maximization of a Social Welfare Function, function of individuals' utilities. Even if this opinion succeeded to induce second thoughts in these theories, this could only be another case of a dwarf on the shoulders of giants. This would not be unusual: the history of distributional ethics is a spiral of paradigm shifts among contenders of major stature.

In presenting anew classical liberalism,⁹ in opposition to John Rawls's (1971b) egalitarian liberalism proposed in order to replace utilitarianism – itself promoted by Jeremy Bentham (1789) for fighting the classical liberal basic rights brandished by the American and French revolutionaries¹⁰ – Robert Nozick (1974) states: “*A Theory of Justice* is a powerful, deep, subtle, wide-ranging systematic work... which has not seen its like since the writings of John Stuart Mill, if then. It is a fountain of illuminating ideas, integrated together in a lovely whole... It is impossible to finish this book without a new and inspiring vision of what a

⁷ Kolm 1995 shows how to launder preferences for comparative social sentiments.

⁸ Kolm 1987c.

⁹ This is a basis of our societies, expressed by our constitutional rights and legal system. The term “libertarianism” is not adequate since it was introduced in recent discussion by Murray Rothbart (1973) for meaning a very different and, in a sense, opposed system where people's freedom is limited not by others' rights but by others' force (this is also the conception of James Buchanan (1975) who, however, emphasizes the constitutional truce which may settle for classical basic rights).

¹⁰ “Rights, nonsense; inalienable rights, nonsense on stilts.”

moral theory may attempt to do and to unite; of how *beautiful* a whole theory can be. I permit myself to concentrate here on disagreements with Rawls only because I am confident that my readers will have discovered for themselves its many virtues... Political philosophers now must either work within Rawls' theory or explain why not."

For precisely the same set of reasons, economists concerned with optimum income taxation must obviously either work within Mirrlees's theory or explain why not.

Since, rationally, thinking precedes computing, what does the oracle of the most revered philosopher of social justice say? For Rawls (1971b), "Justice as fairness ... does not interpret the right as maximizing the good... There is no reason to think that just institutions will maximize the good. Here I suppose... that the good is defined as the satisfaction of rational desire. The question of attaining the greatest net balance of satisfaction never arises in justice as fairness; this maximum principle is not used at all." And for Rawls (1982), "Justice as fairness rejects the idea of comparing and maximizing satisfaction in questions of justice... Desires and wants, however intense, are not by themselves reasons in matters of justice. The fact that we have a compelling desire does not argue for the propriety of its satisfaction any more than the strength of a conviction argues for its truth." Hence, for the philosophy of justice the social optimum is not obtained as a maximum and does not depend on utilities ("the satisfaction of rational desire"), whereas for Mirrlees (1971), it is defined by the maximum of a given function of utilities.

What is, then, the Rawlsian right optimum? Easy: take utility off classical choice theory, there remains the possibility set. Indeed, the answer is: "***A principle of equal liberty.***" "A just social system defines the scope within which individuals must develop their aims, and it provides a framework of *rights and opportunities* and the *means* of satisfaction within and by the use of which these ends may be equitably pursued." "We can express this in saying that in justice as fairness, the concept of right is prior to that of good." And "the priority of right is a central feature of Kant's ethics." (1971b). Finally, "The principles of justice are to ensure to all citizens the equal protection of and access to primary goods as social background conditions and all-purpose means generally necessary for forming and rationally pursuing a conception of the good, and to provide each with a fair share of the requisite all-purpose means." (1982).

This, in fact, is another case of a Hegelian Minerva's owl: an endorsement of the *vox populi* consensus, with a philosophical vindication. Rawls, indeed, acknowledges that "The principles [he] proposes are classical and well known" (1971b, Preface). Yet, the other side of the coin appeared in application, where Rawls initially neglected a number of economists' and other relevant topics: the explicit choice of the specific best fiscal tools, the application of basic liberties to exchange, Pareto efficiency and its relation to unanimity, labour and leisure, the non-rivalry of pure basic rights, the problem with assimilating a choice of justice to an individual self-concerned choice in uncertainty, the case for the actual respect of selfhood concerning productive capacities, and the notion that cooperation through markets may not thoroughly justify ideal equal sharing. However, Rawls progressively acknowledged most of these points over three decades (see below). Taking these issues into account led to the solution presented here (a general non-welfarist distributive and fiscal structure admitting classical liberalism and Rawls' initial intention as particular limiting cases).¹¹

However, the welfarist theory of optimum income taxation considers Rawls' theory as a particular case of itself, that of a maximin in utility, because Rawls advocates a maximin in "primary goods" – the "difference principle." Yet, Rawls (1982) is unambiguous on this point: "To interpret the difference principle as the principle of maximin utility (the principle to maximize the well-being of the least advantaged person) is a serious misunderstanding from a philosophical standpoint."¹²

¹¹ In 1971 also, I published the monograph *Justice and Fairness* presenting several proposals. A "fair" allocation is one which, equivalently, can result from individuals' choices with identical freedoms, and is such that no individual prefers any other's allocation to her own (see Section 3.7 below). It is thus both pure equal freedom and mid-way welfarism (it uses only ordinal and non-comparable preferences). However, with choices of labour and different individual capacities, this solution cannot be Pareto efficient (see note 21). Then, in the next section of this study, "justice" is equality, and "practical justice" is leximin, in individuals' "fundamental preferences" (hence ordinal comparable ones) – the latter concept is approvingly commented about by Rawls in 1982. The solution of free exchange from an equal allocation was also used. Hence, the two basic ideals of equal freedom ("fairness") and equal welfare ("justice") were analyzed, along with a number of more specific properties. One year earlier (1970), I determined optimum non-linear tariffs of public utilities by the maximization of a social welfare function with uncertain utilities – this is a case of specific microjustice.

¹² If, for defining maximin in bundles of primary goods (income, wealth, power, position, self-respect), Rawls had accepted to rest on a concept of utility, he would not even have needed interpersonal comparison of utilities. Indeed, he thought that the same people have the lowest endowment of each of these goods (this is rather right in Western societies). Then, it suffices to maximize the utility of the person who has the least of all goods.

John Hicks (1959) had named the issue in complaining about the exclusive “welfarism” of many academic economists who took this ethic as obvious. Yet, he probably thought of the alternative either as actual judgments and policies, which are only rarely welfarist, or as classical liberalism, which implies unfettered free markets without transfers, and hence can entail widespread poverty and vast inequality. However, there are other alternatives. They are notably freedom of choice and exchange from or with a situation of equality (or second-best equality) which can be in primary goods including income and wealth (Rawls, 1971b), in initial income and labour (Kolm, 1966b, 1971 and other works), in the total value of productive capacities (Pazner and Schmeidler, 1972, 1978, Varian, 1976, Dworkin, 1982), in items closer to consumption such as “capabilities” (Sen, 1985, 1993 and other works), or in initial goods, domains of choice, opportunity, or freedom offered by domains of choice, of any types (Kolm 1971 and other works, and a flourishing of important studies in the last two or three decades).¹³

Yet, some form of welfarism is obviously a possible or the relevant solution of many problems of distribution. If you give a toy to your daughter rather than to your son because she enjoys it more than he does, you apply family philosophical utilitarianism.¹⁴ Someone prone to deep depression and devoid of means should certainly be healed for free in a public hospital; this medical fairness may be a maximin in comparable utility. More broadly, Buddhism advocating minimizing *dukkha* (pain, dissatisfaction) – rather than maximizing *sukkhā* (from which “sugar” comes) – may be a kind of negative welfarism.¹⁵ But is welfarism

¹³ A very partial list of studies that can be related to such approaches includes works of Thomson, Moulin, Schokkaert, Pattanaik, Xu, Bossert, Ok, Sugden, Bavetta, Guala, Peragine, Herrero, Cohen, Roemer, Fleurbaey, Luttens and Ooghe, and, implicitly, Tinbergen, Bös, Tillman, Maniquet (see a review and analysis in Kolm 2004a, Part V).

¹⁴ The adjective is due to the fact that this does not suffice for making sense of a sum of utilities (see Kolm 1996a, Chapters 12 and 14).

¹⁵ Although its favoured means – a stoic-like control of the birth of one’s desires which it also calls “liberation” (*moksa*) – is in a sense opposed to economists’ conception (see *Happiness-Freedom, Deep Buddhism and Modernity*, Kolm 1982). Scholarly welfarism is in fact historically the direct descent of this Indian philosophy. Indeed, the 18th century founders of utilitarianism were thoroughly inspired by Stoicism (and Epicureanism) (Rosen, 2005, Kolm, 2005), whereas the influence of Buddhist and Jain thoughts on Stoic and other Hellenistic philosophies is explained in the previous reference. The oblivion of self-formation occurred with that of the Rousseau-Kant “autonomy” by some narrow-minded post-Mill 19th century scholars (even Mill’s “choice of lifestyle” is a downgrading of full eudemonistic self-formation). Note that the view that utilitarianism is the necessary all-encompassing criterion was, in the West, restricted to English-language scholars influenced by Bentham who introduced this view for a political reason. This is why Rawls appeared to be much less original in other circles who acknowledged constitutional basic rights and where egalitarianism was a familiar ideal.

obvious, logically necessary, or undoubtedly always the right principle? If not, what is its proper domain of relevance? Ronald Dworkin once told me: “utilitarianism is all right for knowing if the stadium should be used for football or for soccer.” In 1970, I assumed that welfarism is appropriate for determining the tariffs of public utilities, and I determined optimum non-linear tariffs in a way similar to Mirrlees’s (1971) computation of the optimum income tax, with, in addition, individual utilities which can be different from one individual to the other, and which are not perfectly known to the planner, in representing this uncertainty by a probability distribution.¹⁶ In fact, presenting the principles for the validity of welfarism and other principles for actual questions is a work which remains to be done (and should not be difficult).

However, Mirrlees’s topic, of central importance, is also precise and specific: the income tax, and hence overall distribution. And if nobody thinks that someone should pay a higher income tax than her neighbour, or than yesterday, because she enjoys more her dollars left or less the dollars taken away, or mixtures of these cases, then everybody rejects welfarism for this issue. Moreover, this seems in tune with our basic constitutional principle, and it should and will be realized in a democracy.

Yet, Mirrlees’s initial model (followed by many others) skilfully assumes that all individuals have the same utility function, because “assuming otherwise is another question.” This working hypothesis is legitimate for the exercise of a scholarly “exploration.” However, this is merely for convenience, and, for actual application, the full and first best model has to be with the actual individual utility functions which differ across individuals, as, indeed, Mirrlees emphasizes in his later work (1986). Even with identical utility functions, people with different income (consumption) and labour have different (local and relevant) eudemonistic capacities. Eudemonistic capacities are resources of the individuals. If, obeying unanimous moral opinion (and basic principles and philosophy), we do not tax, compensate, or use them, we are left with the possibility of taxing, or otherwise being concerned with, the other resources of the individuals, their productive capacities, whose market value, the wage rate, is present in Mirrlees’s model. The taxes and subsidies derived here will be incentive-compatible in inducing people to use their best skills, and the wage rates thus reveal the value of productive capacities. Although Mirrlees’ article of 1971 begins with the remark that we

¹⁶ Kolm (1970a, 1970b).

tax earned income as a proxy for unobservable productive capacities, it ends with the cogent remark that, since we also observe labour, in fact we know the wage rates and can base taxes on them.¹⁷ This is all the more true that wage rates are often directly observable (the public information on a market are its prices, not its private transactions). In fact, for taxing wage rates it suffices to exempt overtime labour from the income tax. And exempting productivity premia and premia for previous formation does the same for the dimensions of effort and formation of the labour input. Pay sheets contain all this information. They define the category of the labour and the job, which generally implies specific effort and formation. And 9/10 of labour income is wage income in our societies. Moreover, taxing full labour income generates strong Pareto inefficiency (and unemployment) which would be much reduced by simply not taxing the actual duration of labour to begin with. It also strongly interferes with the freedom of exchange between the seller and buyer of labour or of its product. Hence, Mirrlees's optimum is second best not actually with respect to information about productive capacities, but with respect to politicians who tax full labour income in ignoring both Pareto efficiency and their duty to respect the basic constitutional right of freedom of exchange, and with respect to information about individual utilities required by the welfarist ethics. *De facto*, with identical individual utilities this theory's objective is the control of the multidimensional inequality in the two goods income and labour (leisure); a precise relation with the justifying welfare can be proposed but is not straightforward.¹⁸ At any rate, fully optimizing a tax function implies optimizing the choice of the tax base, rather than keeping an artificial constraint in choosing one base a priori (hence it implies considering all relevant information, its usefulness, cost and uncertainty, and taxpayers corresponding reactions).¹⁹

1.3 Equal liberty and its properties

¹⁷ The wage tax for achieving "practical justice" as maximin in fundamental (co-ordinal) utility is presented in Kolm 1974.

¹⁸ See Kolm 1999a.

¹⁹ See Section 5.2 and Kolm 2004a, Chapter 10. A few interesting studies have considered a non-welfarist or a "paternalistic welfarist" maximand while keeping the same tax structure. In particular, Kanbur, Keen and Tuomala (1994) minimize a poverty index (see a discussion by Bevan 2006). Kanbur, Pirtillä and Tuomala (2004) review and discuss a number of such studies. As a general rule, however, these policies should consider all relevant variables in the tax base as noted and in the objectives (labour, involuntary unemployment and, first and foremost, freedoms), they should distinguish macrojustice from specific corrections of behaviours, and they should not impair Pareto efficiency (or they could not be implemented in a free and democratic society).

An irrelevance of welfarism requires a paradigm shift in moral values, and hence a little reflection in the style of “philosophy.” For an individualistic ethics, this shifts the moral references to the other individualistic value: liberty. Two types of freedom are relevant here: “social freedom” and freedom of choice. “Social freedom,” i.e., freedom from forceful interference, notably required by our basic constitutional rights and the essence of our legal system (more on this below), is non-rival and hence can be at satiety for all – it is then equal in this particular sense.²⁰ Freedom of choice is defined by the individual’s possibility set. Its equality can take three forms: identical domains, equal freedom for domains that can be different, and social freedom (including free exchange) from an equal allocation. The identity of domains of choice violates both Pareto efficiency and social freedom for a choice of labour, effort, or action when individuals’ productive capacities differ.²¹ This Pareto inefficiency induces a democracy not to realize such solutions (other possible states are unanimously preferred – see below). The two other solutions will be shown to both lead to the same results. As we will see, social freedom from an equal allocation is also “to each according to her merit” from an equal allocation (whereas identical domains amount to according to desert from an equal allocation).²² In the field of the income tax, which is that of the overall distribution in “macrojustice,” and in Mirrlees’s case of constant individual wage rates w_i of individuals i and a balanced redistribution, the obtained policy turns out to simply be a subsidy of $t_i = k \cdot (\bar{w} - w_i)$ to each individual i (a tax of $-t_i$ if $t_i < 0$) where \bar{w} is the average wage rate and k a coefficient of community of resources, solidarity and redistribution in the society.

²⁰ Kolm 1985, 1996a, 2004a.

²¹ If the marginal disposable incomes of two people who provide the same labour or effort are the same, they are not equal to their marginal productivities if these productivities differ, hence the inefficiency, and the policy interferes with these earnings.

²² Merit implies that people are entitled to freely benefit from their “talent and industry” (Kant). We will see that Plato and Aristotle think that everybody conceives justice to imply this “according to merit from equality”, in giving to merit (*axia*) a different definition which, however, comes to the same (see note 39). Relatedly, Rawls speaks of *equal liberty* and not of identity of opportunities. He speaks of a framework of rights, opportunities, and means “within and by the use of which ends may be equitably pursued”. Relatedly again, he rejects reference to individual responsibility. If freedom of choice is also called opportunity, its equality is equality of opportunity, which, therefore, is not necessarily identity of opportunities (i.e., identical domains of choice) which precludes Pareto efficiency (required by a principle of unanimity) and social freedom. With different capacities and Pareto-efficiency (and social freedom), identical domains of choice can only be conceptual tools complemented by restrictions (Kolm 1971 and Section 3.7 below), or extensions such as efficient maximin of liberty (Kolm 1999b) or the theory of “equivalence” (Kolm 1993a, and a review and discussion in 2004a, Chapter 26).

This result has a number of meanings which all contribute to its evaluation – according to classical ethical epistemology.²³ They will be discussed, but can be summarized here as follows. People freely work and earn from an identical initial allocation of labour k and of income $k\bar{w}$. They share equally their production of the same labour k (“Equal Labour Income Equalization,” or ELIE). They receive the same basic income $k\bar{w}$ financed by the same labour k of each (or according to capacities w_i). Everyone works for everyone for labour or duration k , and for herself for the rest. This is also equal wage for equal labour k (this wage rate is the average \bar{w}); or from each according to her capacities, to each equally. This also finally amounts to people’s labour being rewarded according to desert for the same labour k and to merit for the rest (see below). This result also amounts to general balanced labour reciprocity where each individual yields to each other the product of the same labour k/n (where n is the number of individuals); or to each individual owning the product of the same labour of each other. Equivalently, each individual yields to each other less productive the same fraction of the difference in their productivity. Other basic meanings will be shown. Indeed, the result also means an equal freedom of choice provided by the (different) budget sets in the space of income and leisure, or an equal purchasing power for buying those two goods. It achieves an equal sharing of the value of individuals’ capacities, but measured in the two relevant *numéraires*: a part in income value and the rest in labour (leisure, life) value. These transfers also constitute a “concentration” of individuals’ total incomes (including the value of leisure), which is the most inequality-reducing structure of redistribution. Finally, the outcome is but a realization of Plato’s and Aristotle’s *diorthic justice* which they deem to be unanimous opinion when given resources are attached to individuals.

Practically, this result is a flat tax with two fiscal bonuses: an exemption of the revenue over a certain labour (the same for all) – for instance of overtime work –, and an equal tax rebate. This is also a universal basic income financed by an equal labour of each or, equivalently, by a flat tax on the income of any given labour. Or an extension of the income tax to an income tax credit, its limitation to a given labour, and a flattening of the schedule. This straightforwardly provides the agenda of fiscal reform.

This obtained distributive policy will also happen to have a number of notable properties. It is incentive-compatible in the sense that it induces people to use and reveal their

²³ See, for instance, Plato’s “dialectics” in *The Republic* and Rawls’s (1971b) “reflective equilibrium.”

best skills. It is Pareto efficient. It respects social freedom – freedom from forceful interference – notably required by constitutional basic rights. It satisfies the property of “realistic equity-no-envy,” that is, no individual prefers another’s allocation that she can have to her own. And it implies a minimum income (in so far as people are responsible for their low income).

1.4 Summary

Section 2 presents the bases of the question, in pointing out the essential properties of macrojustice, social freedom, Pareto efficiency, and capacities. The derivation and properties of the solution are shown in Section 3 in the simple case. It derives from social freedom from an equal allocation (3.1) or from an equal liberty provided by different domains of choice (3.8). It is equivalent to eighteen highly significant properties, and satisfies important other ones (3.2). It implies a particular degree of inequality reduction (3.3), is incentive-compatible (3.4), implies a minimum income (3.5) and realistic equity-no-envy (3.7), and constitutes a very simple tax structure amenable to a simple reform strategy (3.9). The general case is presented in Section 4, with multidimensional labour which may be reduced to the unidimensional case, and the treatment of involuntary unemployment. In Section 5, welfarism and the liberty-based solution are compared (5.1). The practical implementation is then discussed, in emphasizing the sources of the required information (5.2). Finally, the ways of determining the degree of redistribution in a society are discussed (5.3).

2. Basic facts and values: Macrojustice, social freedom, efficiency, resources²⁴

2.1 Spheres of justice: macrojustice

The main general taxes, notably the income tax, and the general supports to low incomes and aids (including income tax credits) constitute the policy directly affecting the overall distribution of income. The corresponding overall distributive justice belongs to the field of “macrojustice” defined as: the general rule of society and its application to the allocation of

²⁴ The values which will determine the result will all derive from opinion in the society in question, even essentially unanimous opinion; that is, the method used is *endogenous social choice* (this concerns the distinction of macrojustice, the self-accountability of eudemonistic capacities, Pareto efficiency, social freedom, and the ultimate and often notional reference for the degree of community – see Section 5.3).

the largest part of resources. Other issues of fairness concern more specific objects and beneficiaries; they refer to “local justice” (Elster, 1992) and constitute the field of “microjustice” – with a possible distinction of a domain of “mesojustice” for specific but important issues concerning everyone, often about human capital such as education and health. A variety of criteria of fairness are used for these various questions, referring to needs, welfare, dignity, self-respect, happiness, the alleviation of pain, utility, accountability, selfhood, natural endowment, freedom, autonomy, desert, merit, responsibility, equal sharing, tradition, history, status, and so on. Our concern here is restricted to macrojustice, and, more precisely, the resulting overall distribution. Thus, there is a variety of “spheres of justice” (Walzer, 1983) using various principles, but one is quantitatively much more important than the rest, that of macrojustice.

This is particularly the case if disposable incomes are sufficient and freedom of choice, the “respect of consumers’ preferences,” non-paternalism, and Pareto efficiency lead one to leave to income spending – along with the relevant information, insurance, protection of children, etc. – a notable part of the allocation of the goods which can also be provided by specific “welfare policies,” in “mesojustice,” or as “capabilities” – such as, according to the case, nutrition, clothing, housing, health, education, culture, and so on.

2.2 Social freedom and unanimity

Each of two basic and unavoidable general principles lead to the same allocative structure of allocating given resources and leaving people free to act and exchange from this. They are social freedom and Pareto efficiency referring to preference and choice.

Social freedom is the basic rule of our societies. It is encapsulated in the basic rights of our constitutions, and hence this study has to accept it.²⁵ Its theory is worked out in our legal systems. Social freedom means that each person’s acts are free from the forceful interference of other people acting individually, in group, or in institutions. People can only be forced not

²⁵ Social freedom is also the classical negative freedom of philosophers (Kant, J.S. Mill, Berlin, etc.). For its relation with social justice, see Rawls (1963). Social freedom is the pure basic rights – i.e., basic rights not accompanied by earmarked material means that would make them “real”. The means with which these rights are used are provided by the rest of the allocation. This allocation, notably of specific means, and not the pure rights themselves, is the cause of possible rivalries in the use of these rights.

to impose force on others. Free exchange is not forceful interference, it is a fully free action of all participants when no third party forcefully intervenes, and it is important. The ban on forceful interference includes the respect of the intended consequences of free respectful actions (for instance of rights produced in this way). Concerning distribution, the strict application of this rule is classical: distribute the resources given to society (“natural”), and, from this, let people freely act and exchange in respecting others’ such freedom.²⁶

Pareto efficiency is needed for two possible reasons. It is an absence of welfare loss which is valuable even if the distribution is not determined by considerations of welfare. It also is a condition of democracy and freedom of society. Can, indeed, the people be said to rule, and society to be free, if there exists another possible state that everybody in society prefers? (Note also that, in a working competitive electoral democracy, if a state is not Pareto efficient, a contending party can propose a program that will win by the unanimity of the votes). Pareto efficiency will be considered with respect to all actual constraints including those concerning information and “transaction.”

Pareto efficiency can be achieved in two ways. One can impose (or induce) an “end-state” having this property, which requires knowing individuals’ utilities.²⁷ Yet, main results of economics are about the second way: let people freely act and agree; this leads to Pareto efficiency either necessarily as assumed by Ronald Coase, or under conditions which have been abundantly studied. Securing these conditions or remedying their absence is the function of the “allocative branch” of public finance (Musgrave, 1959) – not our present distributive concern. For transfers and distributive and fiscal policy, this securing of Pareto efficiency only requires that the measures are based on inelastic items, that is, items unaffected by people’s choices, which, when they are valuable resources, are the classical “natural resources” if the view is intertemporal (hence, capital is produced).

Concerning the taxation of earned income, Pareto efficiency requires a marginal tax rate of 0 for each taxpayer. This leads, to begin with, to tax the income of only a given labour,

²⁶ Besides being constitutional, generally accepted or desired in our societies, and justifiable as the ban of direct violence (especially if the associated distribution rules misery out), social freedom can be justified as logically necessary in justice. Indeed, someone wants not to be forcefully prevented to do what she wants to do. Hence, she wants social freedom for herself. Her opinion about justice in society has to be impartial by nature and definition. Hence, this person has to want social freedom for everybody, if this is possible. And this is possible because individuals’ social freedoms are non-rival.

²⁷ This is usually supposed to be the job of “the planner” or “a benevolent dictator.”

for instance to exempt overtime work, or to tax the wage rate which Mirrlees says we know since we also know both earned income and the duration of labour (most of the time). Even second-best taxation (as any best) requires one to do this. Indeed, even if the wage rate still had some elasticity for whatever reason, this is not a reason for substantially worsening the elasticity of the base in taxing, in addition, labour duration. This does not prevent achieving any desired redistribution, in choosing the tax rates and the duration of labour taxed. The wage rate can a priori be influenced by formation and intensity of labour. Yet, years of schooling are hardly sensitive to the unknown marginal tax rate that will exist thirty years later. Particular efforts can be exempted. Moreover, with the obtained tax scheme, the interest of people is to use their best possible skills, and hence to reveal them (Section 3.4). Job specification implies formation and intensity, which have an observable market price. Pay sheets show the relevant information for most of labour. One can thus, to some extent, discount wage rates for particular effort in intensity and formation (see also Section 5.2). One can therefore go a long way to de-elasticize this tax, as much as possible. Even if leakages remain, as with all tax rules, one can do infinitely better than taxing the whole earned income. To begin with, even if one could not avoid taxing some marginal sensitive effort or formation, this is not a reason for taxing the whole duration too. The most interesting point, however, is that these most efficient least elastic tax bases are also those that respect social freedom the most, and hence that are the most appropriate for freedom-based distributive justice. Moreover, these human resources constitute the very largest part of the given resources, as we now point out.

2.3 Productive capacities, their importance, and the rights in them.

2.3.1 Relative importance

We have noted that, for macrojustice, a principle of unanimity and of basic freedom allocates eudemonistic capacities to their bearer. There remains to allocate the rights concerning productive capacities.²⁸ A classical remark is that the largest part of the social product comes from labour using these capacities. This is “9/10 or even 99/100” for Locke (1689). Ricardo and Marx emphasize and use this fact. In order of magnitude, labour, capital and the non-human natural resources produce 80, 18, and 2 per cent of social income, for example. Since

²⁸ The cases where eudemonistic capacities can produce an income – artists, cooks, various experts, etc. – need not concern macrojustice.

capital is produced, by definition, the other primary resources finally account for about 97.5% for labour and 2.5% for the non-human natural resources. Moreover, labour does not use all productive capacities (whereas the price of residential land is included in the value of the other natural resources). This shows that *the problem of overall distribution in macrojustice is the allocation of the rights in the value of productive capacities.*²⁹

2.3.2 Rights in capacities and liberties

“Classical liberalism” – the central social ethics of modernity against which the others reacted – equates self-ownership and social freedom without discussion. This is unwarranted. Ownership of an asset consists of several rights, with a standard distinction between the right to use, or *use-right*, and the right to the value of the possibility to use, or “rent” (the classical term notably for natural resources), the *rent-right*.³⁰ A holder of only a right to use is a tenant who has to pay the rent to the holder of the rent-right. The distribution of rights can vary according to periods. Someone can for instance have both rights for part of the time and only use-right (tenancy) for the rest.

Acting is using one’s capacities. Hence, social freedom is having the use-right of oneself. It is implied by self-ownership, but the converse does not hold. Social freedom only implies the right to be either the owner or the tenant of oneself. The latter right is a tenancy-right, the right of self-tenancy. One can have both self-ownership for part of the availability of one’s capacities and only self-tenancy for the rest. Then, for this latter part, the person has to pay the rent to the holders of the rent-rights on herself. She can similarly have rent-rights in others’ capacities and receive the corresponding payments. A person’s productive capacity is valued for the productivity it provides to labour that uses it, and, hence, if an “amount” of it is measured by the labour that can use it, the corresponding rent is the wage that could thus be obtained. For instance, a principle of reciprocity can hold that each person is entitled to

²⁹ Non-human natural resources, apart from this relative importance (notably in countries where about one-third of national income is redistributed), have usually been owned for long by owners who bought them from others, and are often initially allocated by agreed-upon principles of microjustice (proximity, first occupancy). Although the reallocation of some of them can be important in some places, this is not a general possible solution for macrojustice (see Kolm 2004, pages 88-89 – more on this possibility in Kolm 1985).

³⁰ Cf the classical distinction of Roman Law between *usus*, *fructus*, and *abusus*. The latter which, for rights in oneself, refers to the classical discussion of the right to commit suicide, or destroy oneself otherwise, will not concern us here.

receive the value of the product of the same labour from each other, with their different productivities. Such a general balanced labour reciprocity would reduce the inequality in holdings of human assets, to an extent to choose from zero on.³¹

A tax based on an act or its effects interferes with this act, and hence violates social freedom (except if it has been accepted in a previous free agreement, compensates an externality, etc.). A lump-sum transfer, which can be different for each individual, does not interfere with the person's acts. Yet, it can influence future acts because it changes the individual's possibility set. In particular, a tax can be paid from any source: from an asset or a transfer received, or in consuming less or working more. By itself, it makes the possibility set shrink. This refers to a second kind of freedom, freedom of choice from this set. Then, comparison among people introduces two remarks. With a transfer, less freedom for one is more freedom for others. The judgment thus depends where the just benchmark is. Moreover, *ceteris paribus*, more productive people have more freedom of choice because they can have more income (consumption) with the same labour, or more leisure for the same income. If they otherwise receive less or pay more, this may compensate and equalize freedoms of choice (yet, with non-identical domains when productivities differ). Then, more productive people may have to work more than they need to live. Yet they obtain each amount with less effort than others, this may save the people with poorer endowments from starvation or exhaustion, and, in an economically integrated society, the earnings of one person depend on the demands, supplies, desires (needs, preferences) and capacities of all and not only on her own characteristics.

However, self-ownership can also be defended in itself, for a reason of selfhood akin to the noted self-ownership in eudemonistic capacities for macrojustice (although a capacity to earn, used in acting on the outside world and in exchange, is certainly less part of the self – of the core self – of a person than the intimate sensibility of her capacities to appreciate, deplore, enjoy, or endure).³² Self-ownership requires or implies social freedom for three related reasons: it requires or implies the use-right in oneself – hence social freedom –; people

³¹ See Rawls (1971a).

³² Rawls, who emphasized permanently and for long that “the allocation of the given capacities is to be considered as a common asset” (e.g. 1971b and other works), also finally firmly asserted that “our innate capacities are ours and not those of society,” and “a lump-sum tax that would equalize the advantages that our capacities can give us would violate our basic freedoms” (2001). The distributive structure derived here constitutes the syntheses of these two principles (see also Section 3.6 – and property 17 of Section 3.2.1).

should benefit from the value of their services or product that they obtain in free exchange (this also depends on other people's demand for them); and all this is implied by the very concept of ownership. Yet, as noted, the converse does not hold. Full self-ownership corresponds to a very individualistic society, without a priori solidarity for sharing the surplus of economic cooperation and division of labour above autarkic individual activity,³³ the allocation of personal resources given by nature and family, and the resulting consumption. Yet, self-ownership can also be partial, with, for the rest, interpersonal rights and liabilities for capacity rents – and the corresponding transfers –; but these transfers can a priori have any size, including being very small. If a classical liberal, that is, a supporter of full self-ownership, admits that there should be some transfer for alleviating misery, then she admits that there should be some claim on the resources of other people, and hence she does not actually endorse full self-ownership, she only wants this claim on the resources of the better endowed people to be sufficiently limited. However, she may also more consistently argue that helping the poor should be done by free private gifts. Yet, since the poor's situation is a public good for the benevolent givers, Pareto-efficiency – non-waste of this precious resource – requires that they agree, and, in a large society, that the political system and public policy choose and enforce the transfers. Could not they agree, then, as a fair rule for sharing the burden, that each gives according to her capacities, i.e., the same labour (they might also want to subsidize more the least able poor and less those who can earn more)? Such general agreements or consent necessarily underlie the degree of redistribution in a democracy (see Section 5.3).

3. ELIE: the simple case

3.1 Social freedom from equal allocation (allocation of rent-rights)

Capacities themselves are attached to their bearer and cannot be transferred. They transform labour into income, which are the two relevant goods valued by the individuals. With her income, the individual freely buys consumption goods – from social freedom. She also values labour's complement, leisure. A property of the solution has to be social freedom, which implies free exchange. Yet, it has to be from some given allocation, for each individual. This is an allocation of each of the two goods, income and leisure or labour. When no other

³³ “In justice as fairness society is interpreted as a cooperative venture for mutual advantage” (Rawls, 1971b).

characteristic relevantly differentiates individuals (who legitimately possess their own use-rights and eudemonistic capacities), the allocation given to them is to be equal.³⁴ Here, the allocation is multidimensional. The overall distributive principle then is a case of the classical principle of “free exchange from an equal allocation.” Note, however, that the exchange rates are the wage rates and hence are generally not the same for different individuals (hence, the individuals’ domains of choice differ, but we will shortly see that they can also be said to provide equal freedom of choice).³⁵

We will see that this is equivalent to several allocative principles, each of which can be appraised for itself (the general equal labour reciprocity, and the equal freedom of choice, noted above, are two of them). Then one should keep in mind that classical ethical epistemology holds that a principle should be appraised from all its angles, and not only one.

This solution and its properties will first be presented in the simple case of labour represented by one dimension called duration, and constant unit wage rates. This is often the relevant case, and, as we will see, other cases can often be easily reduced to this one (in considering a duration adjusted for the other characteristics of labour), and the results extend straightforwardly to explicitly multidimensional labour (duration, intensity, formation, etc.) and non-linear wages.

There are n individuals indexed by i . Individual i has income y_i , labour ℓ_i , leisure λ_i , and wage rate w_i . The relevant total time is measured as 1, and hence $\ell_i + \lambda_i = 1$. Individual i can pay a tax or receive a subsidy, denoted as a money transfer of t_i which is a subsidy if $t_i > 0$ and a tax of $-t_i$ if $t_i < 0$. Individual i ’s earned income is $w_i \ell_i$, her disposable income is $y_i = w_i \ell_i + t_i$, and we will call her total income her income including the value of leisure λ_i at its market cost and price for the individual w_i , namely $v_i = y_i + w_i \lambda_i = w_i + t_i$.

The equal initial allocation (see figure 1) will be denoted as k for labour and hence $1 - k$ for leisure, and η for income. This allocation of leisure means that each individual pays the income value of her corresponding labour k , $w_i k$ for individual i ; and she receives income η .

³⁴ This is a requirement of rationality in the basic sense of “for a reason”: See Kolm 1971/1998, Foreword, Section 5.

³⁵ The same result is obtained by equal unidimensional sharing, given that capacities can be measured in two different numéraires, income (output) and labour-leisure-life (see property 17 of Section 3.2.1).

The balance of the distributive budget implies $\sum w_i k = n\eta$, that is, $\eta = k\bar{w}$ where $\bar{w} = (1/n) \sum w_i$ is the average wage rate. Hence, individual i is taken away $k w_i$ and handed out $k\bar{w}$. The result is the net subsidy of $t_i = k(\bar{w} - w_i)$, which is a subsidy if $t_i > 0$ and a tax of $-t_i$ if $t_i < 0$.

Given these transfers, each individual i freely chooses her actual labour ℓ_i (and leisure λ_i) and the corresponding earned income $w_i \ell_i$, from social freedom. That is, she freely deviates from the equal allocation of labour k and income $k\bar{w}$ in working $\ell_i - k$ more which permits her to have the extra income of $w_i(\ell_i - k)$ (this will turn out to be the relevant case for macrojustice in a large society).

Individual i 's final disposable and total incomes then are

$$y_i = w_i \ell_i + t_i = (\ell_i - k)w_i + k\bar{w},$$

$$v_i = y_i + w_i \lambda_i = w_i + t_i = k\bar{w} + (1 - k)w_i.$$

Number k is the equalization labour, $k w_i$ is individual i 's equalization income, and $k\bar{w}$ is the average equalization income. The obtained scheme is Equal Labour Income Equalization, or, for short, ELIE. It can be seen under various angles, each of which shows a different meaning which can be taken as the justification, but these meanings are logically equivalent. It also has a number of important properties. The particular case $k=0$, which implies $t_i=0$ for all i , corresponds to full self-ownership.

3.2 Properties

3.2.1 The different but equivalent significant definitional properties (the avatars of ELIE)

1) *Free exchange from an equal allocation:*

$$y_i - k\bar{w} = w_i(\ell_i - k).$$

2) *Equal freedom of choice.* This property will be shown shortly (Section 3.8).

3) *Equal labour income equalization.* Each individual pays the income she can produce with the same labour, and the proceeds are equally distributed. For labour k , individual i pays $k w_i$, the receipt $\sum k w_i$ is equally distributed, and hence each individual receives $k\bar{w}$.

4) *Equal pay for equal work*, for the equalization labour k . The equal wage rate is the average \bar{w} . Indeed, for labour k , each individual receives $k\bar{w}$.

5) *From each according to her capacities, to each equally* – where “according to” means in proportion of. Indeed, each individual i pays kw_i , and receives the equal $k\bar{w}$.

6) *Everyone works for everyone for the same labour k and for herself for the rest.*

7) *Equal universal basic income financed by equal labour.* Indeed, each individual receives the same $k\bar{w}$. She pays for it in working the same labour k , which produces kw_i for individual i .

8) Equivalently, this is a *universal basic income financed according to capacities* – in the sense of in proportion of: each individual i pays kw_i .

9) *Equal general labour reciprocity*: each individual hands out to each other the product of the same equal labour. Indeed, in writing $r=k/n$,

$$t_i = k \cdot (\bar{w} - w_i) = \sum_{j \neq i} w_j r - (n-1)w_i r,$$

and r is this labour of reciprocity.

The aspect of fairness of these transfers may be favourable to their acceptance and hence to their realization as genuine “gift exchanges.” Yet, in a large society problems of information will demand a centralized realization.³⁶

10) Equivalently, this can be seen as *each individual owning the rent of the same amount r of each other’s capacities.*

11) *Equal partial compensation of productivity differences*: each individual more productive than another pays her the same fraction of the differences in their productivity. That is, if $w_i > w_j$, individual i pays the fraction r of the difference $w_i - w_j$, $r \cdot (w_i - w_j)$. This results from the

³⁶ ELIE thus achieves a relation of reciprocity often demanded by Rawls (1971a, 1971b, 1993, 1999, 2001). Reciprocity and its role in social ethics are the object of the volume Kolm (1984, see also 2006).

reciprocity property in aggregating the transfers for each pair of individuals. ELIE thus is a set of “progressive transfers” of total incomes (each from a higher to a lower such income) – we will shortly see that its inequality-reducing effect is in fact much more specific.

12) *Each individual earns according to desert for the equalization labour and to merit for the rest.* The classical difference is that desert means according to effort or labour alone, whereas merit means according to effort or labour and the personal capacities they use. In individual i 's disposable income $y_i = \bar{w}k + w_i(\ell_i - k)$, the second term means according to merit for the deviation of chosen ℓ_i from the given k , since it multiplies this differential labour by individual i 's productivity w_i . Yet, the first, given term remunerates labour k according to this labour alone (and a collective average productivity).

13) *The total income of an individual is the weighted average between her productivity and the average productivity, with the equalization labour as weight.* Indeed, $v_i = k\bar{w} + (1-k)w_i$.

14) *A concentration of total incomes.* The preceding formula says that the total incomes v_i constitute a linear uniform concentration to the mean of the productivities w_i (for short, a concentration)³⁷ with degree or coefficient k . This is the transformation or redistribution which can the most certainly be said to diminish inequality.³⁸

15) *A flat tax with exemption above a given labour and an equal rebate or credit.* For the sole “distribution branch,” overall balance is added. The equal credit (rebate) is $k\bar{w}$, and the tax paid by individual i is $\tau w_i \ell$ for some labour ℓ (and $\tau \ell = k$ for balance).

16) *A flat-rate fixed income distributive scheme.* ELIE results from the conjunction of several fiscal properties of income taxation often advocated. (1) A negative income tax or income-tax credit for subsidizing low incomes. (2) A flat (linear) tax, often defended for a reason of simplicity. (3) Replacing actual labour by a notional given labour for computing taxes and subsidies. (4) Functional finance whose present “distribution branch” (Musgrave, 1959) considers, at least notionally, a balanced distributive budget of taxes and subsidies. (See Section 3.9).

³⁷ See Kolm 1966a.

³⁸ See Kolm 1999a.

17) *A bi-numéraire equal sharing of the value of productive capacities.* Individual i 's total available productive capacities measure 1 in labour inputs and w_i in income output. Both incomes and life-time (labour, leisure) are morally meaningfully compared across individuals. An equal sharing of the value of individuals' capacities where the fraction k is measured in income-value and the rest in labour-leisure-life value (time), gives, to each individual, $k\bar{w}$ in income and $1-k$ in labour-leisure-life time. Hence, individual i receives, in income value, $v_i = k\bar{w} + (1-k)w_i$.

18) *Diorthic justice.* For Plato and Aristotle, everybody thinks that justice is that everyone is accountable for what she does, and what is given to society should be equally shared, from commutative and distributive justice respectively. The former implies free exchange.³⁹ When a given value is allocated to an individual and should not or cannot be taken away, this equality is achieved by compensatory transfers in *diorthic justice*. This is the case for productive capacities and the ELIE transfers with the appropriate measures.

3.2.2 Five properties

Moreover, in its application to macrojustice, ELIE has the following three properties, shortly shown:

1) *Incentive compatibility:* The individuals have a self-interest in using their best skills, thus revealing their capacities for the tax-subsidy policy.

2) *Realistic equity-no-envy and realistic fairness.* No individual prefers any other's allocation (of income and labour) that she can have to her own. (And the outcome is Pareto-efficient).⁴⁰

3) *A minimum income:* There is a minimum income.

ELIE also respects social freedom and Pareto efficiency.

³⁹ Commutative justice implies social freedom and free exchange, since a person's contribution should be rewarded according to "merit" (*axia*), which, in an exchange, is the value for the other party. See *The Laws*, *Nicomachean Ethics* and *Eudemian Ethics*.

⁴⁰ Kolm 1971. "Realistic" refers to the restriction to the possibility of having the others' allocations compared to one's own. This reference analyzes both cases. "Fair" has been taken to mean Pareto efficient and satisfying equity-no-envy of the non-"realistic" kind (Varian, 1976).

3.3 The degree of inequality reduction or equalization

For a given redistribution of any form, there is an equivalent ELIE or concentration which produces the same variation in some measure of the inequality of the distribution. The corresponding coefficient k is the equivalent equalization labour, a degree of equalization or inequality reduction.⁴¹ Let us only notice presently that present-day fiscal policies in nations give an equivalent equalization labour of an order of magnitude of 1 to 2 days per week (from the US to Scandinavian countries). This shows the order of magnitude of possible degrees of equalizations for nations.

In particular, this shows that $\ell_i > k$ for all normal full-time labour ℓ_i . These are the labours that concern macrojustice. Part-time labour complementing family income is something else. The case of involuntary unemployment (total or partial) will be considered shortly. The people who would choose $\ell_i < k$ with a notable capacity w_i are discarded for macrojustice for three reasons. (1) They can be discarded because they are very few, not in the bulk of the people. (2) As Rawls (1982) writes, they are not “fully cooperating members of the society... engaged in social cooperation over a complete life... for mutual advantage,” and hence amenable, for this reason, to the principles of *overall* distributive justice. Indeed, their wage rate and earned income, as any other, depend on the social productivity due to the division of labour and collective cooperation through exchanges in all the society, and hence on all individuals’ capacities and preferences (and demands and supplies); but their very low labour makes them benefit and contribute little from and to this system; they largely withdraw from this cooperation. (3) Relatedly, people morally object to an equalization labour $k < \ell_i$ for normal full-time labours. Indeed, they understand that some labour of a particularly productive and highly remunerated person be taxed for subsidizing people endowed with poorly remunerated productive capacities. By contrast, they would not understand that some

⁴¹ One can propose, more precisely, the following “synthetic degrees of equalization” of a redistribution. A measure of inequality of a vector x of incomes is “synthetic” (Kolm 1966b) if it has an “absolute” form $I(x)$ and a “relative” form $I(x)/\bar{x}$ where \bar{x} is the average income, such that the former is invariant to an equal addition to all incomes (“equal-invariant”) and the latter is invariant to a multiplication of all incomes by the same number (“intensive”). Then $I(x)$ is also “extensive” (linearly homogeneous). A result is that the coefficient k of a concentration of x that diminishes such a $I(x)$ as much as a certain redistribution is equal to the relative decrease in $I(x)$. The most standard examples of synthetic measures are the Gini index and the standard deviation. This applies, for ELIE, to the transformation of total incomes.

leisure time of this person be taxed at the value of its potential production (taxing for inducing this person to work and produce more is something else and would have to be justified).

3.4 The incentive-compatibility of macrojustice

Individuals' wage rates and productivities are a priori observed on markets (either directly, or in dividing labour income by labour duration). However, an individual can in general use skills lower than her actual capacities. She may be induced to do it to reduce a tax burden (or augment a subsidy). Then, the observed skill and the corresponding wage rate are not the individual's capacity. A priori, an individual with capacities which can earn the wage rate w_i can use a number of skills earning wage rates $w'_i \leq w_i$.⁴² If these wage rates are used for the tax-subsidy scheme, individual i 's utility function writes $u^i([(l_i - k)w'_i + k\bar{w}'], 1 - l_i]$, an increasing function of both arguments, her disposable income (consumption) and leisure, with $\bar{w}' = (1/n)\Sigma w'_i$. Individual i chooses l_i and $w'_i \leq w_i$ that maximize u^i .

Since function u^i is increasing, $\partial u^i / \partial w'_i$ has the sign of $l_i - k + k/n$. Hence, individual i chooses $w'_i = w_i$ if $l_i > k \cdot [1 - (1/n)]$, hence in particular if $l_i > k$, the relevant case for individuals submitted to the general rule of macrojustice.⁴³ Then, these people choose to use their most productive skills, that is, to fully use their capacities, and, ipso facto, they reveal them and their market value.⁴⁴

3.5 The average equalization income as minimum income (in so far as people are not responsible for their low income)

The situation $l_i \geq k$ implies that $y_i = k\bar{w} + (l_i - k)w_i \geq k\bar{w}$.

⁴² See Dasgupta and Hammond (1980).

⁴³ Yet, if $n=2$ individual i 's incentive compatibility only requires $l_i > k/2$.

⁴⁴ This incentive compatibility waves away Rawls's (2001) worries about taxing "innate skills": they could not be known because people would hide them, and people would have to be forced to work with these skills. In fact, people freely and self-interestedly choose to work with these skills (distinct from painful labour) and hence reveal them and their value. Moreover, highly skilled people may have to work for paying taxes whatever the tax base. These skills are ours, but their market value is provided by society. The ablest are not "penalized" with $k < l_i$ for normal full-time labour, they still are advantaged by their higher productivity (although less so the higher k is).

Hence, the average equalization income $k\bar{w}$ appears as a minimum income in macrojustice. All individuals with normal full labour ℓ_i and a w_i not very small have a substantially higher income. An individual with $w_i=0$ faces no demand for her labour and does not supply it for earning; her income is $y_i = k\bar{w}$. We will see that the introduction of involuntary unemployment leads to the same result. An individual with a very low w_i has an income y_i close to $k\bar{w}$ (the income effect leads this person to choose a high ℓ_i whereas the price effect has the opposite consequence).⁴⁵

3.6 Particular cases

The full self-ownership of classical liberalism is the case $k=0$, hence $t_i=0$ for all i : there is no (re)distribution. The more redistributive or “egalitarian” the society, the higher k is. A level of k close to the lowest normal full labour would be redistributive in the extreme, more than any out-and-out “egalitarian” has ever dreamed of⁴⁶ (at the level of a nation; it is possible in smaller communities). Coefficient k is the degree of community of ownership of given resources in the society.⁴⁷

⁴⁵ The very few productive individuals who choose to work $\ell_i < k$ (for the unique earning of the household) are – we have seen – a priori out of the rule of macrojustice. However, if one can give them or make them pay the net subsidy/tax $t_i = k(\bar{w} - w_i)$, their income would be lower than $k\bar{w}$ by $(k - \ell_i)w_i$. Yet, since their w_i is notable, they could earn more in working more (higher ℓ_i), and hence their low disposable income is due to their choice of ℓ_i for which they are responsible. And the deficit of their income to $k\bar{w}$ is the higher the more lazy they are. In this case, this w_i would be estimated from these people’s education level, diplomas, or previous occupation, or they may have only one skill or an interest for only one type of work using their specific capacities (since they a priori have a material interest in trying to make believe that their capacities are lower than they are, for instance in working at skills lower than they actually can). Those who want and manage to make believe that they are thoroughly impotent would receive $k\bar{w}$ (or a little less since their w_i may be brought down to zero in computing the average \bar{w} also). That is, they face the minimum income of the universal basic income of this amount. This possibility of having this basic income without working is a property that some advocates and theoreticians of the basic income particularly value and emphasize (Philippe van Parijs). Yet, this basic income has, here, a defined and specific financing. However, again, the very few eccentric people satisfied with this income level whereas they can have much more in working are not a concern for macrojustice for the reasons indicated.

⁴⁶ For example, fully equalize the incomes of 35 hours per week! Yet, the part of self-ownership implies that people with identical utility functions (if we accept to consider this assumption) will be better off when they are more productive.

⁴⁷ Rawls’s early discussions implied a high level of k but did not consider the possibility of lowering the disincentive effects of redistribution. When he saw this possibility, Rawls (2001) endorsed self-ownership, in the name of basic freedoms, but in explaining that this means banning a tax that would “equalize the advantages that our capacities can give us.” That is, he bans not only $k=1$ (he discusses forcing the able people to work – Dworkin’s “slavery of the talented”), but also k close to standard labour time. He even proposed $k=0$ for international distribution and aid in spite of strong and growing international economic integration (cooperation) (Rawls, 1999). Our discussions about the appropriate

3.7 Realistic equity-no-envy

The principle of “realistic equity” has been defined as: *no individual prefers any other’s allocation that she can have to her own* (Kolm, 1971).⁴⁸ This is satisfied by the final allocations considered here simply because each individual freely chooses her own on her possibility set.

3.8 Equal freedom of choice (allocation of freedom of choice)

Two different (but related) kinds of freedom are relevant here. Social freedom defined by the nature of constraints, and freedom of choice which is a property of the domain of possible choice. This domain is, here, the set of pairs of income and leisure-labour that an individual can choose, that is, the budget set defined as $y_i \leq w_i \ell_i + t_i$, $y_i \geq 0$ (in the absence of other sources of income), $\ell_i \in [0, 1]$.

Social freedom precludes that these domains of choice coincide for individuals with different wage rates or productivities w_i , since this figure is the slope of the border (budget line).

A higher productivity w_i permits one to earn more income $w_i \ell_i$ for any labour ℓ_i (or to have more leisure for the same income y_i), and hence, by itself, it gives more freedom of choice to the individual. On the other hand, paying a higher tax or receiving a lower subsidy

level of k were interrupted by his disease and his death (see Kolm, 2004c). The determination of the appropriate k in a society is the topic of Part IV of Kolm 2004a (see Section 5.3 below). An individual can belong to several communities of redistribution, with various constituencies and coefficients k . For the family who pools all resources, $k=1$ (the transfers are by gift). Beyond national redistributions, there can be international ones. For instance, there can be one for the European Community with a k much lower than the national ones (possibly increasing in time when the national ones decrease). And there can be a redistribution for the worldwide community of mankind (with, presently, a much lower possible k).

⁴⁸ Note that this property, whether “realistic” (i.e. with the restriction to the possibility to have) or not, does not deal with a sentiment of envy (which is an externality), although it is related to it (see Kolm 1995a). The simple property that no individual prefers any other’s allocation to her own holds if and only if these allocations could be chosen, by each individual, on identical domains of choice (it holds if this is the case, and, if it holds, the set of these allocations plus any allocations that no individual prefers to her own constitutes such a domain). Given note 18, this shows why this property is Pareto inefficient with labour with different productivities. Hence, for this question this property can only be efficiently completed by restriction, extension, or maximin (Kolm 1971, 1993a, 1996b).

diminishes this freedom of choice (lower disposable income for each labour ℓ_i). Hence, there seems to be a tax/subsidy scheme that compensates the effect of productivity on the freedom of choice so as to yield an equal freedom of choice for all. As we have seen, equality is rational – *prima facie*⁴⁹ – in the absence of other relevant characteristics of the individuals.

Let θ_i denote an a priori undefined transfer to individual i – a tax of $-\theta_i$ if $\theta_i < 0$. Individual i 's disposable and total incomes are $y_i = w_i \ell_i + \theta_i$ and $v_i = y_i + w_i \lambda_i = w_i + \theta_i$, and the usual representation of her choice is that she chooses her leisure or labour $\lambda_i = 1 - \ell_i$ at price w_i and her income for buying consumption y_i at price 1, in satisfying her budget constraint $v_i = w_i \lambda_i + y_i$, as a result of her choice on the possibility set of her budget set $w_i \lambda_i + y_i \leq v_i = w_i + \theta_i$, $y_i \geq 0$, $\lambda_i \in [0, 1]$ (she a priori can throw income away). The budget constraint is classically defined by the (total) income v_i and the two prices, w_i and 1. Equal is normally defined from defining more or less. Let us apply this to this freedom. Only the budget inequality can differ. If an ordering of the freedom of choice that it provides is representable by an ordinal function, this function writes $F(v_i, w_i, 1)$ where a larger F means providing more freedom.

We consider “real” freedom in the sense of economics, which means that function F is homogeneous of degree zero in income and prices. When prices can vary, the standard economists’ procedure represents them by a price index, which is always a linear function of the prices with weights that represent a “basket” of the goods. Such a price index, here, would be $\pi = \alpha w + \beta$ where w is a wage rate, with $\pi_i = \alpha w_i + \beta$. Hence, $F(v_i, w_i, 1) \equiv f(v_i, \pi_i)$. Since function F is homogeneous of degree zero in its three variables, function f is in its two variables v_i and π_i . Hence, it is a function of the ratio v_i/π_i , $f = f(v_i/\pi_i, 1) = \varphi(v_i/\pi_i)$. Functions F and f are increasing with v_i since a higher income at given prices permits one to have more of the two goods λ_i and y_i . Hence, φ is an increasing (ordinal) function, and v_i/π_i a one of its specifications. This is real income or purchasing power, in standard terms. Hence, equal freedom of choice (budget freedom) is equality of these magnitudes for all i , $v_i/\pi_i = \gamma$ for all i , or $v_i = \gamma \alpha w_i + \gamma \beta$. Since $v_i = w_i + \theta_i$, $\theta_i = \gamma \beta - (1 - \gamma \alpha) w_i = \gamma \beta - k w_i$ in denoting $k = 1 - \gamma \alpha$. But $\sum \theta_i = 0$ from distributive balance, hence $n \gamma \beta = k \sum w_i$ and $\gamma \beta = k \bar{w}$, and therefore $\theta_i = k \cdot (\bar{w} - w_i) = t_i$ of the preceding sections.

⁴⁹ I.e., in the absence of an overpowering reason for the contrary (such as impossibility or the presence of other relevant criteria).

Hence, the obtained result ELIE is also equal freedom of choice, here equal budget freedom, with the standard economic practice when prices can vary, and it is classical equal real income or equal purchasing power.

The point $\lambda_i=1-k$ (i.e., $\ell_i=k$) and $y_i=k\bar{w}$ satisfies the budget equation $v_i=w_i+k(\bar{w}-w_i)=w_i\lambda_i+y_i$ of all individuals i , that is, all budget lines pass by the same point $K=(1-k, k\bar{w})$ (figure 1).

We have seen that $\ell_i>k$ for all normal full-time labour ℓ_i , and, for moral reasons, for all individuals falling under the standard rule of macrojustice. For any given labour $\ell>k$, $y_i=w_i\ell+k(\bar{w}-w_i)=w_i(\ell-k)+k\bar{w}$ is higher the higher w_i , the more productive the individual. The opposite holds for $\ell<k$, but this is not a priori relevant for macrojustice. In particular, for a normal full-time labour and for all relevant ℓ_i , $\ell_i>k>k[1-(\bar{w}/w_i)]=\ell_i^0$ which is the labour with which a productive individual with $w_i>\bar{w}$ pays her distributive tax if she has no other income. The extremely few and eccentric very productive individuals who want to consume and work almost not at all choose to drop out of social economic cooperation and not to use the advantage provided to them by the joint venture of economic exchange, and hence are not a concern for overall distribution in macrojustice.

3.9 A standard tax structure

3.9.1 About the simplest classical structure

The obtained ELIE turns out to be the association of tax structures among the simplest and most straightforward and common. This makes it implementable by classical fiscal reforms. Its structure can extend to the financing of other public expenditures with which the distributive effect can integrate easily.

Indeed, ELIE amounts to a balanced, flat-tax fiscal scheme with exemption of overtime work and an equal tax credit (rebate).

The exemption can be above any given labour (the same for all) – the rate adjusts for the difference –, and other dimensions of labour can be treated similarly if needed.

In dropping the requirement of financial balance, this scheme can also be used for financing other expenditures. We will shortly see that this constitutes the most relevant application of two of the main classical “principles of taxation”: equal *sacrifice* (in labour), and according to *capacities* (to earn). Then, the whole scheme becomes a flat tax with exemption of overtime work and an equal tax credit (rebate). Or a flat tax on the income of any given labour (the same for all) and an equal tax credit (rebate).

3.9.2 Tax credit, flat rate, inelastic base, functional finance

A number of fiscal reforms are classically advocated, and realized in some places. The ELIE distributive scheme is the conjunction of four of them. Starting from the income tax, for instance, one can modify it in introducing the following reforms:

- An income tax credit, or negative income tax, for subsidizing low incomes, already established in many places.
- A flat tax, implemented in some places with success and – it seems – favourable economic effects in addition to its virtue of simplicity.⁵⁰
- An inelastic base in taxing only a given labour – which eliminates disincentive effects.⁵¹
- Functional finance distinguishing, at least notionally, distributive taxation from other functions of the fiscal system. In other words, the issue is Musgrave's (1959) “distributive branch”.

The result of these four measures is the obtained ELIE distributive scheme. Start from the tax on earned income $f(w_i l_i)$ where f is an increasing function. Extend it to an income tax credit (negative income tax), with $f(w_i l_i) < 0$ when $w_i l_i < y^o$. Then tax a given labour l^o , the same for all, rather than l_i . The tax-subsidy becomes $f(w_i l^o)$. The next step flattens the tax (constant rate), and the structure becomes $\tau_i = \alpha w_i l^o - \beta$. Finally, consider distribution separately, so that $\sum \tau_i = 0$. Then, $\beta = \alpha l^o \bar{w}$, and, denoting $\alpha l^o = k$, $\tau_i = k(w_i - \bar{w})$ and the result is the net subsidy of previous sections $t_i = -\tau_i = k(\bar{w} - w_i)$.

⁵⁰ For instance the income tax of eight countries – and more soon – in Central and Eastern Europe.

⁵¹ A number of special purpose taxes are the earnings for a given time (for instance for supporting aging people in France).

3.9.3 Full taxation

If these transfers sufficiently achieve overall distributive justice, the other public expenditures should be financed according to the principle which is neutral in this respect, “benefit taxation” (with some rule for distributing the surplus) – as an overall guideline. Other classical principles of public finance are “neutral” with respect to the tax alone. In equal sharing, each individual pays the same share $b=B/n$ of the “allocation budget” B . The two other classical principles are equal sacrifice and according to capacity to pay. They come to the same here if equal sacrifice is equal labour (utilities are irrelevant for macrojustice and equal sacrifice in money is equal sharing), and since, for earned income, capacity to pay is capacity to earn (and “according to” is taken to mean “in proportion of”). Then, indeed, each individual i pays aw_i , where a is both this equal labour and the coefficient of proportionality. If this finances the “allocation budget” B , $B=a\sum w_i=an\bar{w}$, and $a=b/\bar{w}$ where b is this budget per capita. This is the principle for financing the equal universal basic allocation $k\bar{w}$ in this view of the ELIE distributive scheme. In joining both types of expenditures, each individual provides the same labour $k+a$ to public finance.

3.10 Basic income, basic contribution

The obtained distributive scheme can also be seen as a universal basic income – a classical proposal – with a specific financing. This financing answers the conceptual and practical questions posed by such proposals.

Conceptually, the supporters of providing an equal basic income to everybody often present it as the securing of an equal freedom.⁵² However, this makes people have an equal purchasing power if they have no other income, in particular if they do not work. If they provide some specific labour, the more productive people have a higher income. Hence, equal freedom should a priori concern the whole possibility sets, and not only the subsets with no labour. From Section 3.8, this implies that receiving an equal basic income is matched by contributing with an equal labour.

⁵² See, for instance, van Parijs (1995).

Financing, indeed, is the basic problem of proposals of a basic income. It should be sufficient, efficient, and fair. It cannot be an equal tax since this would cancel out the income. It should not add to general inefficient taxes. If it is according to given capacities, that is, as the product of a given labour for all, the whole scheme is some equal income, from some equal labour, or ELIE.

4. ELIE: the general case

4.1 Multidimensional labour

4.1.1 General labour

Labour, defined here by its inputs, is a priori multidimensional. It has duration, speed, fraction of labour time where there is actual work, mental concentration, use of memory, capacity of recognition, fast decision, physical strength of various possible types, relations of various possible types, various possible types of previous education, formation, training and experience, choice of activity,⁵³ and so on. A job can also require several types of labour. These characteristics are related in various ways. One can only think about types of detailed characteristics. In fact, we will only need labour characteristics as they are defined for determining wages or incomes in employment and the labour market – essentially rather broad types. For instance, consideration of duration, education, and exceptional intensity may suffice. Each relevant input is representable by an index or a set of indexes such that a higher level augments output or its value. For the present purpose, such indexes may be ordinal only, which suffices for representing comparisons by more or less (for instance in a type of intensity). An index of type j will be a number ℓ^j , its level for individual i will be ℓ_i^j , and $\ell_i = \{ \ell_i^j \}_j$ is the vector representing individual i 's labour. The money (market) value of the production of individual i is $p_i(\ell_i)$. If total labour duration of individual i is zero, $p_i=0$. The common application to overall distribution in macrojustice concerns individuals small in a large number, for whom the effects of others pass through market prices given to them. If individual i works in a team with joint output, p_i implies a sharing of this output, but this issue need not be pursued for the present purpose.

⁵³ Choosing an activity where one earns less but that one prefers for any other reason is a case of lower labour.

4.1.2 General ELIE

All the foregoing reasoning can be repeated in this case of multidimensional labour and more general production function. With a net subsidy of t_i (a tax of $-t_i$ if $t_i < 0$), individual i 's disposable income is $y_i = p_i(\ell_i) + t_i$. Social freedom from an equal allocation with a balanced distribution leads one to define a multidimensional equalization labour $k = \{k^j\}$ and to give to each individual i the net subsidy

$$t_i = \bar{p}(k) - p_i(k_i)$$

where $\bar{p}(k) = (1/n) \sum p_i(k)$. Individual i 's disposable income is

$$y_i = p_i(\ell_i) + t_i = p_i(\ell_i) - p_i(k) + \bar{p}(k).$$

As with the simple unidimensional case, the cases relevant for macrojustice will a priori be with $\ell_i^j > k^j$ for all j and i , with the relevantly defined types j , for the same factual and moral reasons.

As above and with the same proof, this policy is incentive compatible: if the functions p_i used are the observed ones, the individuals' interest is to use their best skills (for given labour in time, education, effort, etc.).

As above, this result has a number of different ethically meaningful (but logically equivalent) properties:

- Free exchange from an equal allocation ($\ell_i = k$, $y_i = \bar{p}(k)$).
- Equal labour income equalization (ELIE). This equalization labour is k .
- Equal pay for equal work, for the equalization labour k .
- Equal universal basic income ($\bar{p}(k)$) financed by equal labour (k) from each individual.
- Equal general labour reciprocity: each individual i yields to each other $p_i(k)/n$.
- Equal partial compensation of productivity differences: if $p_i(k) > p_j(k)$, individual i yields $(1/n)[p_i(k) - p_j(k)]$ to individual j .
- Each individual earns according to desert for the equalization labour and to merit for the rest.

– Equal freedom of choice, as equal purchasing power of the same bundle of income and generalized leisure (leisure time, leisurely work, lower educational effort).

There is a minimum income of $\bar{p}(k)$.⁵⁴

No individual prefers any other's final allocation that she can have to her own.

4.1.3 Reduction to the unidimensional case

Multidimensional labour can often be reduced to unidimensional one with a labour duration adjusted for the other characteristics of labour. The crucial property is that labour is a flow. If individual i performs a given type of labour, let us distinguish, in the labour vector ℓ_i , duration d_i from the vector of other parameters $\ell'_i: \ell_i = (d_i, \ell'_i)$. For a given type of labour defined by ℓ'_i , the output is a priori proportional to duration: $p_i(\ell_i) = d_i F_i(\ell'_i)$. If individual i 's particular productivity is “output-augmenting,” $F_i = a_i f(\ell'_i)$, and one can consider an equivalent unidimensional linear case with $L_i = d_i f(\ell'_i)$ as the equivalent duration adjusted for the other characteristics of labour, $w_i = a_i$, and therefore $p_i(\ell_i) = w_i L_i$. Then, the multidimensional equalization labour k corresponds to the unidimensional $\tilde{k} = k^1 \cdot f(k')$ where k^1 is the duration dimension of k and k' the set of its other dimensions.⁵⁵ Another practical method of including education in labour will be noted in Section 5.2.

4.2 Involuntary unemployment

Involuntary unemployment should first be remedied by macroeconomic policy, labour market policy, unemployment insurance, and education policy. The obtained ELIE distributive policy provides a de facto minimum income which may attenuate causes of wage rigidities both in

⁵⁴ The same remark as above holds for the eccentric people who are productive and prefer very low work and income.

⁵⁵ A number of arguments of function f intervene directly multiplicatively, such as speed, fraction of labour time with actual labour, or fraction of non-faulty outputs which is sometimes an appropriate measure of intensity. Others intervene by a multiplicative factor which is a function of the argument (this is often the case for duration of training).

the labour supply and in public policies of minimum wage.⁵⁶ However, unemployment compensation can be logically integrated within this scheme. The logical device consists of *considering someone who cannot work more as someone who cannot earn more in working more* – since, if she works for income, she will not chose to provide extra labour if this brings no extra income. The outcome will be that *someone involuntarily totally unemployed, or partially unemployed at a labour not exceeding the equalization labour, has an income equal to the average equalization income in which the $p_i(k)$ for these individuals are replaced by 0 for full unemployment and, for partial unemployment, by $p_i(\ell_i^o)$ where $\ell_i^o < k$ is individual i 's employment.*

The involuntary unemployment can affect all dimensions of labour. For instance, for education, the obligation to accept a job demanding lower qualification is a case of partial involuntary unemployment. For simplicity, let us use here the case of unidimensional labour. The unemployment constraint is $\ell_i \leq \ell_i^o$. If there is full involuntary unemployment, $\ell_i^o = 0$. The noted device consists of replacing the technical production function $p_i(\ell_i)$ by its truncation:

$$P_i(\ell_i) = p_i(\ell_i) \text{ if } \ell_i \leq \ell_i^o, \text{ and } P_i(\ell_i) = p_i(\ell_i^o) \text{ if } \ell_i \geq \ell_i^o.$$

The application of the obtained ELIE scheme with this function gives $t_i = \bar{P}(k) - P_i(k)$ and $y_i = P_i(\ell_i) + t_i = P_i(\ell_i) - P_i(k) + \bar{P}(k)$. If $\ell_i = \ell_i^o$ and $\ell_i^o \leq k$, $P_i(k) = p_i(\ell_i^o) = P_i(\ell_i^o) = P_i(\ell_i)$, and therefore $y_i = \bar{P}(k)$. This is in particular the case for full unemployment, $\ell_i^o = 0$. If $\ell_i = \ell_i^o \geq k$, $y_i = p_i(\ell_i^o) - p_i(k) + \bar{P}(k)$. Note that $\bar{P}(k)$ is obtained from $\bar{p}(k)$ in replacing $p_i(k)$ by $p_i(\ell_i^o)$ for individuals i unemployed at an employment $\ell_i^o < k$ (by 0 for fully unemployed people).

5. Comparison and realization

5.1 Philosophical underpinnings

5.1.1 First best and second best, welfare and freedom

The essence of the previous discussion can be epitomized as follows.

⁵⁶ An ELIE distributive scheme can replace a minimum wage policy in making everybody gain (see Kolm 2004a, Chapter 7).

The basic, primary, and most essential property of a normative result (such as an “optimum” income tax) is its ethical principle. Whatever the obstacles in application, one cannot hope to reach a second best if one does not aim at the first best to begin with. With respect to information, better be vaguely right than precisely wrong, better look for one’s lost keys where they have been lost rather than under the lamp because there is more light. By the way, knowing all individuals’ utility functions that mean happiness, comparing their variations or levels across individuals, cleaning them appropriately, and finding a Social Welfare Function, constitutes a gigantic conceptual and informational challenge required by a welfarist income tax and overall distribution.

Fortunately, the providence is on the analysts’ side since it seems that nobody thinks – in real life – that individuals’ eudemonistic capacities should be relevant for the income tax and overall distribution. This coincides with our basic constitutional rule: give us equal rights, freedoms, and means, and let us choose to “pursue happiness” as we see fit. Our satisfaction and utility are in our private sphere for macrojustice. Goodness is our own affair, from the fair means and rights secured by macrojustice (Rawls). These views are about first best, and not motivated by issues of information. Compassion and affection lead to distributive judgements and actions which can be concerned with eudemonistic capacities, but this is not the central overall distributive justice. A consequence of this general opinion is that recommendation about income taxation based on a welfarist criterion has no chance to be applied. Complication is another reason for this conclusion (even with the simplest – unrealistic – hypotheses about individual utilities).

Freedom from forceful interference – “social freedom” – is the basic rule required by common opinion, constitutional basic rights, and Pareto efficiency (itself required by unanimity and democracy, and resulting from non-interference in the absence of relevance of a direct definition of end-state optimality). Then, social freedom from an equal allocation (of income and leisure), equal freedom of choice (with different domains for respecting Pareto efficiency and social freedom with different wage rates), equality with a dual *numéraire* of income and labour-leisure-lifetime, general equal labour reciprocity, equal basic income financed by equal labour, and a number of other equivalent properties, all lead to the ELIE distributive scheme. It depends on a degree of (re)distribution which is a degree of

community of given resources and of solidarity in the society in question. The full self-ownership of classical liberalism is a limiting case.

5.1.2 Welfare and ELIE

This result, based on freedoms and equality, makes no reference to welfare in the properties that define or can define it. However, ELIE induces a Pareto efficient state as a result of the choice of the individuals, in its first best application and as much as possible in its second best – which is also first best with respect to all the constraints of the problem, including concerning information – (note that politicians who choose to tax full earned income $w_i \ell_i$ or $p_i(\ell_i)$ do not make this choice for a reason of second-best). Pareto efficiency is related to unanimous choice, but it also classically has a welfare aspect.

Yet, since the end-state resulting from individuals' choices is Pareto efficient, this state also maximizes some Social Welfare Functions increasing functions of individuals' utility levels (or non-decreasing and increasing for at least one). Let $u^i(y_i, \lambda_i)$ be a specification of individual i 's ordinal utility function and $W(\{u^i\})$ be such a Social Welfare Function. The problem is that if the y_i and $\lambda_i=1-\ell_i$ result from an ELIE, any such function W should have a complicated form (even with simple functions u^i) which has no intelligible meaning concerning welfare, and, indeed, no intelligible meaning except that of leading to an optimum implementable by an ELIE – a tautology.⁵⁷

5.2 Implementation

⁵⁷ Indeed, if θ_i denotes an individualized lump-sum transfer to or from individual i and

$$U^i(w_i, \theta_i) = \max_{\ell_i} u^i(w_i \ell_i + \theta_i, 1 - \ell_i)$$

the indirect (Roy) utility function of individual i , the condition is

$$\text{Arg} \max_{\{\theta_i\} \geq \Sigma \theta_i = 0} W[\{U^i(w_i, \theta_i)\}] = \{k \bar{w} - w_i\}.$$

This implies in particular, assuming differentiability of W and u^i with $W_i = \partial W / \partial u_i$ and $u^i_1 = \partial u^i / \partial y_i$, denoting $\ell_i^*(w_i, \theta_i)$ individual i 's choice of ℓ_i assumed to be an interior solution and hence satisfying $du^i/d\ell_i = 0$, and since $\Sigma \theta_i = 0$, that the solution of the set of equations in the θ_i

$$dW/d\theta_i = W_i \cdot u^i_1 [w_i \ell_i^*(w_i, \theta_i) + \theta_i, 1 - \ell_i^*(w_i, \theta_i)] = \lambda$$

for some number λ yields solutions θ_i each linear function of the corresponding w_i . The reader can check that this proves the statement about the impossible direct welfarist meaning of function $W(\{u^i\})$, whatever functions u^i are.

The incentive-compatibility of ELIE entails that people who know that it will be applied to them have an interest in working with their best, most efficient, valued and remunerative skill, thus fully and freely revealing their productive capacities or, more exactly, what is needed of them, their market value, which need only be observed in markets and earnings. This value is the only information needed for setting the tax and subsidies of the ELIE scheme (given the coefficient or equalization labour k).

This leads to a Pareto-efficient result, whereas the taxation of the full earned income leads to this result only when it gives the same utility to everyone (Mirrlees, Dasgupta and Hammond), a condition which is an extreme redistribution politically very unlikely, often impossible if it were meaningful, and, indeed, actually meaningless since it assumes that people have identical utility functions of income and labour.

The implementation of ELIE can then be achieved with extremely simple and easy-to-implement devices. For instance, it suffices to exempt overtime labour earnings of the income tax. Then, if standard labour is ℓ^o , taxation of its earnings ($y_i^o = w_i \ell^o$ for individual i) at the same uniform rate k/ℓ^o , the same for all, accompanied by an equal distribution of the proceeds which constitutes an equal and uniform lump-sum tax rebate (credit), achieves the ELIE scheme. The same base can be kept for financing also other public expenditures. This can implement the tax principles *according to capacities* – which has to mean capacity to earn for earned income – and *equal sacrifice* (in labour). Then, there is a uniform universal tax rate of $k/\ell^o + \beta = (k + b/\bar{w})/\ell^o$, where $\beta = B/\sum y_i^o$ is the needed extra budget B as a fraction of the total taxed income (total income less overwork income, $\sum y_i^o = \ell^o \sum w_i = n \ell^o \bar{w}$) and $b = B/n$ is the per capita extra budget; and everyone benefits from an equal income tax rebate or credit of $k\bar{w} = (k/n \ell^o) \sum y_i^o$. More generally, the scheme is achieved by a double egalitarian (and in this sense fair) fiscal favour, an exemption and a rebate: exempt labour above a given level – the same for all –, and provide an equal rebate or tax credit (plus a flat tax which is more redistributive the higher the rate).

If one wants the refinement of multidimensional labour, a similar exemption from the income tax of productivity premia and of premia for previous formation, when they exist, has the same effect with respect to effort and education, formation and training.

We also have seen in Section 3.9 how a small set of straightforward and classical reforms of the present income tax transforms it into the obtained distributive scheme: income tax credit (negative income tax), constant rate, a given labour for base, and budget balance (for the distribution effect).

The revealed values of capacities used in ELIE are wage rates, the prices of labour. In a standard market, the prices are publicly known, whereas the quantities exchanged between two agents, and their value, are private information – these are, here, actual labour and labour income. At any rate, if one knows labour income and labour, one knows the wage rate (as Mirrlees remarked).

In our societies, 9/10 of labour is wage labour. Pay sheets are available to fiscal administration. A pay sheet provides all the needed information or most of it. It shows the wage rate, the wage paid, labour duration, the category and type of labour which implies a given previous education and formation and a given intensity of work (attention, speed, physical force), sometimes explicitly the level of previous formation and education, overtime labour and pay, sometimes specific premia for productivity due to intensity and for previous education or formation, and so on. The usual fiscal checking and penalties can be used.

As for all taxes and subsidies, the implementation of the obtained distributive scheme will use estimates and approximations. They will depend both on the availability of observation and information, and on the degree of precision with which one wants to implement the theoretical ideal scheme. It may result from a compromise between both. It should be emphasized that even a rough application of the scheme will almost certainly be an improvement over present-day practice on the grounds of both social efficiency and social ethics. For instance, a universal equal subsidy plus a flat tax based on a given labour would be a very important first-degree application of ELIE. One can also introduce the scheme progressively in various ways which can be associated. One way is in size: one would add an ELIE scheme with a low coefficient k to the existing taxes and subsidies, and increase progressively this coefficient in diminishing correspondingly other taxes and subsidies and

abandoning them when the scheme fully replaces them. Another progressive introduction is about dimensions: one would begin with a unidimensional ELIE about labour duration, then consider education and intensity first roughly, for the most conspicuous cases, and then, possible, more thinly (either in a multidimensional way or through the adjusted labour duration noted above). In fact, any use of a less elastic base for a tax or subsidy – any “de-elasticization” of it – is a step in the direction in question. It should also be noted that, with the appropriate value of coefficient k , these reforms, total or partial, can be achieved in satisfying better everybody’s interests.⁵⁸

For non-duration dimensions of labour, the observation of wage differentials provide the market value of the various levels of education and diploma, and of the painfulness, disagreeableness, effort, or intensity required by various types of occupations.⁵⁹ For non-wage labour (1/10 of total labour in our societies), the fiscal administration can use its usual procedures of more or less approximate estimation: comparison with similar labour in the wage sector, general characteristics of the type of activity, declaration of earnings and labour with checks and penalties, recoupment of information, use of standard values for income or labour, and so on. It should be recalled that all tax bases raise such problems for a smaller or larger fraction of taxpayers (it has been estimated that 30% of the income tax base evades the tax in the US,⁶⁰ and very similar figures are found elsewhere). It is more often easier to estimate the income of an occupation by unit of time than its total income, than the converse. At any rate, one cannot hope to achieve second-best optimum taxation if one does not aim at the relevant first best to begin with.

A number of issues of implementation of the obtained scheme have been specifically analyzed.⁶¹ One concerns the subsidy to people with low earning capacities; it has been shown that an ELIE distribution can be better for everybody than the set of present-day aids such as income tax credit or minimum wage, and it can replace it progressively with improvement for all at each step. Other analyses have considered the issue of education. The incentive compatibility of ELIE implies that, with this policy, people have an interest to use their best skills in learning. Yet, the first remark is that educational choices hardly depend on forecasts of the tax on earnings decades later (who knows what this tax will be?) and hence

⁵⁸ See the analysis and examples in Kolm 2004a, Chapter 7.

⁵⁹ For education, see, notably, the work of Mincer.

⁶⁰ Slemrod (2002).

⁶¹ Kolm 2004a.

imperfections in this tax induce little disincentives and wastes. An education level reached depends on capacity, time, and effort. The standard number of years of schooling taken as a dimension of the equalization labour depends on the society. Education-adjusted labour duration (Section 4.1.3) has been used. Another approach augments each labour by the proportion of education time for total labour time in life. This leads to a corresponding educational rebate either in the wage rate or in the equalization labour working time used for determining each person's contribution. Through education and otherwise, people's capacities depend on the formation, motivation, information and aid provided by the family. The ethical treatment of these differences relates to that of bequest, and more generally of gifts – free acts of the givers but an inequality for the receivers – which can be related to the above-discussed sharing of “gifts of nature.”

5.3 The degree of redistribution

Coefficient k of the obtained distributive scheme is a degree of redistribution, equalization, common ownership of the rent of productive capacities, socialization of the surplus of economic cooperation, and solidarity about individuals' endowments. Societies commonly perform redistributions aiming at smoothening inequalities and insufficiencies in individuals' endowments and resulting incomes. The structure of their actual redistribution is generally not an ELIE, but its intensity or degree is particularly significantly measured by the coefficient k of the “equivalent ELIE” which provides the same decrease in an index of inequality of total incomes. This is due to the fact that the “concentration” structure of redistribution – which is that of ELIE – is the most unambiguously inequality-decreasing.⁶² In nations, where most of the redistribution beyond families is performed, the actual redistributions result from an accumulation of a number of ad hoc policies, each introduced in considering one or two effects and its contingent electoral consequences, and the overall result is easily seen to be wasteful and can hardly claim any kind of rationality.⁶³ Hence a progress, obeying what people want about macrojustice, would be to replace present-day redistributions by their equivalent ELIE. This can practically be done to everybody's benefit, rapidly or more or less progressively according to possibilities. However, ethical reasoning should also consider the appropriate degree of redistribution, i.e., coefficient k .

⁶² See Kolm 1999a.

⁶³ For an illuminating analysis in the case of France, see Bourguignon and Chiappori (1998).

If a society is free from forceful interference from outside, is democratic in any broad sense, and obeys the political part of basic rights which says that collective concerns should be chosen from the participation of all citizens, then what should be done in the society can only be derived from its members' opinion about it, for two reasons: a moral reason applying these principles, and a practical reason because the rule will be decided and implemented by society members. This principle of "endogenous social choice" abides, to begin with, by consensuses of reflective normative judgments. This amounts to Rawls's quest for an "overlapping consensus." At any rate, if everybody agrees about a point, so do you, because you are one of them ("we are all embarked," Pascal wrote).

There is, in our societies, de facto a consensus about social freedom and basic rights, in a particular sense about Pareto efficiency (see above), and about the irrelevance of eudemonistic capacities for macrojustice. With the rationality of equality, this implies an ELIE structure for macrojustice. Our societies also manifest a broad consensus about a minimum income. Since this is $k\bar{w}$ with ELIE, this implies a consensual level of coefficient k . This k as a fraction of average labour is as the minimum income as a fraction of average income corrected for the correlation between labour and wages.⁶⁴ However, there also is some assistance in the fields of microjustice and mesojustice, and the level of minimum income and opinions about it can change with sometimes some delay between various political segments of the public opinion.⁶⁵

People reveal their opinion about minimum income, in speech, voting, or acquiescing, even if they know they will have to pay for it. The same holds for many other or more general issues in social ethics and distributive justice. Without being cynical, one may remark that if an individual is "small in a large number" of opinions about a public policy, her own expression has no actual effect on the outcome, and, therefore, sincerely expressing her moral view has no effect on her self-interest. Yet, some people's expression may be biased by their self-interest, because it actually influences the result, or from the simple remark that this is indeed often the case. However, the case of ELIE offers a straightforward way of avoiding this obstacle. Indeed, for individuals with average wage $w_i = \bar{w}$, the net transfer is $t_i = k(\bar{w} -$

⁶⁴ The coefficients k revealed by the ELIE equivalent to the redistribution and by the minimum income can be equalized by the choice of the index of inequality for defining the former. Moreover, the relation depends on the precise definitions of the relevant transfers and minimum income.

⁶⁵ Yet, often less wealthy categories favour higher minimum standard, but in reference to their own lower standard, which produces a sometimes surprising convergence of opinions.

$w_i=0$, whatever k . Hence, these people have no self-interest about k , and, therefore, their opinion about it expresses their moral view only. Moreover, actual moral views about justice are, by nature and definition, independent of their holder's self-interest and impartial, hence, here, independent of their holder's productive capacities. Therefore, these views of the distributionally pivotal people with average wage a priori tend to constitute an unbiased sample of those of the citizenry.

People's judgments about the justice of the distribution are more concentrated than their self-interested judgments because they constitute a type of altruism and, moreover, because they are impartial by nature and definition.⁶⁶ Yet, they may still differ. However, these judgments result from reason, the influence of other people (including family, friends, and political discourses), life experiences (and, possibly, some basic sensibility). Therefore, they will a priori be made more alike if people's information becomes more complete and, hence, alike, both about people's situation, experiences and feelings, and about other people's moral judgments concerning the distribution and their causes in reasoning, past experience, and moral sentiments and emotions (including information about "how it feels" both to be in others' situation and to hold their moral view). This can notably result from mutual information, dialog, and debate. However, such processes take time and effort. Then, a number of theories, presented elsewhere, can estimate the outcome and hence help society's and people's awareness of it. They include the theory of interpersonal influences in a dialog which can be in part notional, the derivation of individuals' impartial social preferences from their preferences only interested in themselves and relatives, complete theories of the "original position" and "moral time sharing" (each individual assumes she is each individual in successive lapses of time) taking account that individuals have a priori different preferences about being various individuals and about risk, and others.⁶⁷

6. Concluding remarks

Normative economics should use the principles appropriate to each problem. In particular, if a normative view is held, after due reflection, by everybody in society, no opposite proposal has a chance to be implemented. These principles often do not refer to welfare or utility. They are

⁶⁶ These properties can be expressed and explained precisely (Kolm 1984, 2004a, 2006). This effect of altruism is a development of a remark of Edgeworth (1881).

⁶⁷ See Kolm 2004a, Part IV.

often liberty, equality – and in particular equality of liberty –, and solidarity. They directly determine the right distribution of means, even if one thinks that the satisfaction or happiness that people derive from their use is an important (or a very important, or the sole important) thing. The contrast between welfarism and eleutherism (referring to liberty) is a very old issue since Bentham promoted utilitarianism as an ideological weapon in the war against revolutions waged in the name of the principle that “Men are free and equal in rights.”

These remarks are applied here to the issue of overall distributive justice in macrojustice, and in particular the income tax. The principles derive from common sentiment (*vox populi*), our basic political principle, and reflective philosophy (illustrated by Rawls). The associated properties of social freedom and unanimity-based Pareto efficiency demand primary respect, and equal freedom of choice that respect them lead to the obtained scheme. This structure has a number of very meaningful aspects summarized in Section 3.2. Its incentive-compatibility facilitates the observation of the required information, which is easier to obtain than for most actual taxes and aids (not to speak of adequate utilities). Particularly fortunate aspects of the result – in addition to its principles and its various meanings – are its simplicity and clarity (necessary for democratic implementation), and its resulting from straightforward and classical reforms. The degree of redistribution and solidarity is implicit in present-day social policies, and should be a main issue of the ongoing political debate in a society (which a number of technical analyses can help). The simplicity and richness in meaning result from the minimum philosophical investment in the premisses of normative economic analysis.⁶⁸ Realistic fiscal welfarists often discover that their “second best” is too complicated (and understandable by people and policies), and intuitively advocate, in practice, a simple “third best” such as a flat tax and a uniform credit, thus coming close to the actual first best (simply add exempting overtime work and perhaps a few refinements) – another case of Minerva’s owl where full analysis vindicates pragmatism.

References and bibliography

Allingham, M.G. 1975. Towards an ability tax. *Journal of Public Economics* 4: 361-76.
 Arrow, K.J. 1951, 1963. *Social Choice and Individual Values*. New York: Wiley. New Haven: Yale University Press.

⁶⁸ This paper also provides an example of the logical necessity of renaming the classical sub-field of “Welfare Economics” with a more appropriate and general heading such as “Normative Economics.”

- Atkinson, A.B. 1973. How progressive should income tax be? In *Essays on Modern Economics*, ed. by M. Parkin and R. Nobay. London: Longman.
- Atkinson, A.B. 1995. *Public Economics in Action: the basic income/flat tax proposal*. Oxford University Press.
- Bentham, J. 1843. *The Works of Jeremy Bentham*, 11 vols., ed. by John Bowring. Edinburgh: William Tait.
- Bevan, D.L. 2006. On the shape of the optimal tax-transfer schedule under non-welfarist objectives. Mimeo, Department of Economics, Oxford.
- Bourguignon, F. and P.-A. Chiappori. 1998. Fiscalité et redistribution. *Revue Française d'Economie* 13(1): 3-64.
- Buchanan, J.M. 1975. *The Limits of Liberty*. Chicago: University of Chicago Press.
- Coase, R.H. 1960. The Problem of Social Cost. *Journal of Law and Economics* 3: 1-44.
- Cohen, G.A. 1995. *Self-ownership, Freedom and Equality*. Cambridge: Cambridge University Press.
- Dasgupta, P., and P.J. Hammond. 1980. Fully Progressive Taxation. *Journal of Public Economics* 13: 141-54.
- Diamond, P.A. 1980. Income taxation with fixed hours of work. *Journal of Public Economics* 13: 101-110.
- Dworkin, R. 1981. What is Equality ? Part I : Equality of Welfare; Part II : Equality of Resources. *Philosophy and Public Affairs* 10: 185-246, 283-345.
- Edgeworth, F.Y. [1881]1888. *Mathematical Psychics*. London: C. Kegan, Paul.
- Elster, J. 1992. *Local Justice*. Cambridge: Cambridge University Press.
- Fleurbaey, M. and F. Maniquet. 1996. Fair allocation with unequal production skills: The no- envy approach to compensation. *Mathematical Social Sciences* 32(1): 71-93.
- Fleurbaey, M. and F. Maniquet. 1999. Cooperative production with unequal skills: The solidarity approach to compensation. *Social Choice and Welfare* 16: 569-83.
- Fleurbaey, M. and F. Maniquet. 2005a. Fair income tax. *Review of Economic Studies*, forthcoming.
- Fleurbaey, M. and F. Maniquet. 2005b. Help the low-skilled or let the hardworking thrive? A study of fairness in optimal income taxation. *Journal of Public Economic Theory*, forthcoming.
- Fleurbaey, M. and F. Maniquet. 2005c. Fair social orderings when agents have unequal production skills. *Social Choice and Welfare* 24(1): 93-127.
- Gordon, R.H. 1984. *Essays on the Causes and Equitable Treatment of Differences in Earnings and Ability*. Garland Publishing, Inc.
- Hicks, J. 1959. *Essays in World Economy*. Oxford: Basil Blackwell. Preface, reprinted as "A Manifesto." In *Wealth and Welfare*. Oxford: Basil Blackwell, 1981, pp. 135-41.
- Kanbur, R., M. Keen, and M. Tuomala. 1994. Optimal non-linear income taxation for the alleviation of income-poverty. *European Economic Review* 38: 1613-32.
- Kanbur, R., J. Pirttilä, and M. Tuomala. 2004. Non-welfarist optimal taxation and behavioral public economics. CESIPO Working Paper n°1291.
- Kant, I. 1786 (1959). *The Foundations of the Metaphysics of Morals*. New York: Bobbs-Merril.
- Kant, I. 1786 (1965). *The Metaphysical Elements of Justice*. New York: Bobbs-Merril.
- Kolm, S.-Ch. 1966a. *Les choix financiers et monétaires (théories et techniques modernes)*. [Monetary and Financial Choices]. Paris: Ed. Dunod.
- Kolm, S.-Ch. 1966b. The optimal production of social justice. In International Economic Association Conference on Public Economics, Biarritz. Proceedings ed. by H. Guitton and J. Margolis. *Economie Publique*, Paris: CNRS, 1968, pp.109-77, and *Public Economics*, London: MacMillan, 1969, pp.145-200. Reprinted in *The Foundations of 20th Century*

- Economics, Landmark Papers in General Equilibrium Theory, Social Choice and Welfare*, selected by K.J. Arrow and G. Debreu, 2001, Cheltenham: Edward Elgar, pp. 606-644.
- Kolm, S.-Ch. 1970a. *L'Etat et le système des prix*. [The State and the Price System]. Paris: CNRS-Dunod.
- Kolm, S.-Ch. 1970b. *Prix publics optimaux*. [Optimum Public Prices]. Paris: CNRS-Dunod.
- Kolm, S.-Ch. 1971. *Justice et équité*. Paris: Cepremap. Reprint CNRS, 1972. English translation, 1996, *Justice and Equity*. Cambridge MA: MIT Press.
- Kolm, S.-Ch. 1973. A note on optimum tax evasion. *Journal of Public Economics* 2.
- Kolm, S.-Ch. 1974. Sur les conséquences économiques des principes de justice et de justice pratique. *Revue d'Economie Politique* 1: 80-107.
- Kolm, S.-Ch. 1982. *Le Bonheur-Liberté (Bouddhisme profond et modernité)*. [Happiness-Freedom (Deep Buddhism and Modernity)]. Paris: Presses Universitaires de France. New edition 1994.
- Kolm, S.-Ch. 1984. *La Bonne Economie: La Réciprocité Générale*. [The Good Economy: General Reciprocity]. Paris: Presses Universitaires de France.
- Kolm, S.-Ch. 1985. *Le Contrat social libéral (Théorie et pratique du libéralisme)*. [The Liberal Social Contract (Theory and Practice of Liberalism)]. Paris: Presses Universitaires de France.
- Kolm, S.-Ch. 1986. *Philosophie de l'économie*. [Philosophy of Economics]. Paris: Editions du Seuil.
- Kolm, S.-Ch. 1987a. The freedom and consensus normative theory of the state: The liberal social contract. In *Individual Liberty and Democratic Decision-Making: The Ethics, Economics and Politics of Democracy*, ed. by P. Koslowski. Tübingen: J.C.B. Mohr, pp. 97-127.
- Kolm, S.-Ch. 1987b. Liberty-based public economics: Its foundations, principle, method, application and structural results. Paris: CERAS, 60.
- Kolm, S.-Ch. 1987c. *L'Homme Pluridimensionnel*. [Pluridimensional Man]. Paris: Albin Michel.
- Kolm, S.-Ch. 1991. The normative economics of unanimity and equality: equity, adequacy and fundamental dominance. In *Markets and Welfare*, ed. by K.J. Arrow. London: Macmillan, pp. 243-86.
- Kolm, S.-Ch. 1993a. *Equal Liberty*. Paris: CGPC.
- Kolm, S.-Ch. 1993b. *Efficient Economic Justice*. Paris: CGPC.
- Kolm, S.-Ch. 1993c. Free and equal in rights: The philosophies of the 1789 Declaration of the Rights of Man and of the Citizen. *Journal of Political Philosophy* 1: 158-183.
- Kolm, S.-Ch. 1994. L'égalité de la liberté. *Recherches Economiques de Louvain* 1: 81-86.
- Kolm, S.-Ch. 1995a. The economics of social sentiments: The case of envy. *Japanese Economic Review* 46: 63-87.
- Kolm, S.-Ch. 1995b. The modern theory of justice. *L'Année Sociologique* 5: 297-315.
- Kolm, S.-Ch. 1996a. *Modern Theories of Justice*. Cambridge MA: MIT Press.
- Kolm, S.-Ch. 1996b. The theory of justice. *Social Choice and Welfare* 13: 151-82.
- Kolm, S.-Ch. 1999a. Rational foundations of income inequality measurement. In *Handbook of Income Inequality Measurement*, ed. by J.Silber. Dordrecht: Kluwer, pp. 19-94.
- Kolm, S.-Ch. 1999b. Freedom Justice. CREME, University of Caen.
- Kolm, S.-Ch. 2000. A historical introduction to normative economics. *Social Choice and Welfare* 17, 4: 707-38.
- Kolm, S.-Ch. 2004a. *Macrojustice, The Political Economy of Fairness*. Cambridge: Cambridge University Press.
- Kolm, S.-Ch. 2004b. Liberty and distribution: Macrojustice from social freedom. *Social Choice and Welfare* 22: 1-33.

- Kolm, S.-Ch. 2005. Review of F. Rosen, Classical utilitarianism from Hume to Mill. *Journal of Economics*.
- Kolm, S.-Ch. 2006. Introduction to the economics of giving, altruism, and reciprocity (Chapter 1), and Reciprocity: its scope, rationales, and consequences (Chapter 6). In S.-Ch. Kolm and J. Mercier Ythier (eds.), *Handbook of the Economics of Giving, Altruism, and Reciprocity*. Amsterdam: North Holland.
- Locke, J.[1689] 1960. *Second Treatise of Government*, ed. by P. Laslett. Cambridge: Cambridge University Press.
- Luttens, R.I. and E. Ooghe. 2006. Is it fair to make work pay? *Economica*.
- Maniquet, F. 1998a. An equal right solution to the compensation-responsibility dilemma. *Mathematical Social Sciences* 35: 185-202.
- Maniquet, F. 1998b. An axiomatic characterization of the equal labor income equalization. Mimeo.
- Mirrlees, J. 1971. An exploration in the theory of optimum income taxation. *Review of Economic Studies* 38: 175-208.
- Mirrlees, J. 1976. Optimal tax theory: a synthesis. *Journal of Public Economics* 6: 327-58.
- Mirrlees, J. 1986. The theory of optimal taxation. In *Handbook of Mathematical Economics*, vol. 3 ed. by K.J. Arrow and M.D. Intriligator. Amsterdam: North-Holland.
- Musgrave, R. 1959. *The Theory of Public Finance*. New York: McGraw-Hill.
- Nozick, R. 1974. *Anarchy, State and Utopia*. New York: Basic Books.
- Pazner, E. 1977. Pitfalls in the theory of fairness. *Journal of Economic Theory* 14: 458-66.
- Pazner, E. and D. Schmeidler. 1972. Decentralization, income distribution and the role of money in socialist economies. *Economic Inquiry*.
- Pazner, E. and D. Schmeidler. 1974. A difficulty in the concept of fairness. *Review of Economic Studies* 41: 441-43.
- Pazner, E. and D. Schmeidler. 1978. Decentralization and income distribution in socialist economies. *Economic Inquiry* XVI: 257-64.
- Rawls, J. 1963. Constitutional liberty and the concept of justice. In C. Friedrich and J. Chapman (eds.), *Nomos VI, Justice*, New York: Atherton Press, pp. 98-125.
- Rawls, J. 1971a. Justice as reciprocity. In S. Gorovitz (ed.), *Utilitarianism: John Stuart Mill: With Critical Essays*. New York: Bobbs-Merrill, pp. 242-68.
- Rawls, J. 1971b. *A Theory of Justice*. Revised edition, 1999. Cambridge MA: Harvard University Press.
- Rawls, J. 1982. Social unity and primary goods. In *Utilitarianism and Beyond*, ed. by A. Sen and B. Williams. Cambridge: Cambridge University Press, pp. 159-85.
- Rawls, J. 1993. *Political Liberalism*. New York : Columbia University Press.
- Rawls, J. 1999. *The Law of Peoples. With the Idea of Public Reason Revisited*. Cambridge MA: Harvard University Press.
- Rawls, J. 2001. *Justice as Fairness: A Restatement*. Ed. by E. Kelly, Cambridge MA: Harvard University Press.
- Rosen, F. 2005. *Classical Utilitarianism from Hume to Mill*.
- Rothbart, M. 1973. *For a New Liberty*. New York: Macmillan.
- Schokkaert, E., and L. Lagrou. 1983. An empirical approach to distributive justice. *Journal of Public Economics* 21: 33-52.
- Schokkaert, E., and B. Overlaet. 1989. Moral intuitions and economic models of distributive justice. *Social Choice and Welfare* 6: 19-31.
- Schokkaert, E., D. Van de gaer, F. Vandenbroucke, and R.I. Luttens. 2004. Responsibility-sensitive egalitarianism and optimal linear income taxation. *Mathematical Social Sciences* 48(2): 151-82.

- Seade, J. 1980. Optimal non-linear policies for non-utilitarian motives. In D. Collard, R. Lecomber and M. Slater (eds.), *Income Distribution: The Limits to Redistribution*. Bristol: John Wrights and Sons.
- Sen, A.K. 1985. *Commodities and Capabilities*. Amsterdam: North-Holland.
- Sen, A.K. 1993. Well-being and capability. In M. Nussbaum and A. Sen (eds), *The Quality of Life*, Oxford: Oxford University Press.
- Slemrod, J. 2002. Tax systems. *NBER Reporter*, Summer 2002: 8-13.
- Slemrod, J., and S. Yitzhaki. 1987. Tax avoidance, evasion and administration. In *Handbook of Public Economics*, vol. 3, ed. by A.J. Auerbach and M. Feldstein. Amsterdam: North-Holland, pp. 1423-70.
- Stern, N. 1982. Optimum taxation with errors in administration. *Journal of Public Economics* 17: 181-211.
- Stiglitz, J.E. 1982. Self-selection and Pareto efficient taxation. *Journal of Public Economics* 17: 213-40.
- Stiglitz, J.E. 1987. Pareto efficient and optimal taxation and the new new welfare economics. In *Handbook of Public Economics*, vol.2, ed. by A.J. Auerbach and M Feldstein. Amsterdam: North-Holland, pp. 991-1042.
- Van Parijs, P., 1995, *Real Freedom for All*, Oxford University Press, Oxford.
- Varian, H., 1975. Distributive justice, welfare economics, and the theory of fairness. *Philosophy and Public Affairs* 4: 223-47.
- Varian, H., 1976. Two problems in the theory of fairness. *Journal of Public Economics* 5: 249-60.
- Walzer, M. 1983. *Spheres of Justice*. Oxford: Blackwell.

