

Chapter 2

Equality of educational opportunity with responsibility increasing with age*

Abstract

In this chapter, we take for granted that the relevant currency of educational justice is the set of essential educational achievements, and we move on to a discussion about the most adequate aggregation procedure. Since inequalities of outcome variables, such as essential educational achievements, are caused by both morally relevant and morally irrelevant factors, a fraction of inequality should be considered as acceptable while another one should be viewed as unacceptable. Departing from John Roemer's algorithm, we adopt an 'educationist' view and take into account some particular features of the schooling process. We are led to defend a normative goal of equality of educational opportunity in which the responsibility which is assigned to individuals increases as they grow up. We address some objections and outline post-schooling policies that would be compatible with our approach.

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1 Introduction

As stated in the previous chapter, we are trying to provide a conceptually reasonable and empirically useful definition of educational justice, a task which requires making three main choices. In the previous chapter, we have focused on the first one, and we have argued in favor of taking the set of essential educational achievements (e.g., test scores) as the currency of educational justice. Now we turn to the second point, namely the aggregation/evaluation procedure.

An approach which consists of obtaining an unresolved ‘trade-off’ as a result of a reasoning or modeling procedure, is usual in economics. A remarkable example are public-economics models where there is an inequality aversion parameter defining an “equity-efficiency trade-off”, which is left to be solved by the (imaginary) social planner. Rawls (1999) criticizes such an approach, which he labels “intuitionist”, on the grounds that it does not offer a specific description of the normative optimum. While we understand very well the interest of economics models’ trade-offs, we tend to support Rawls’ position when normative issues are being dealt with, such that we should - at least try - to overcome the usual intuitionist or neutral approach. As a result of our discussions, we defend a normative goal of equality of educational opportunity in which the responsibility which is assigned to individuals increases as they grow up.

The text is structured as follows. In section 2, we transpose John Roemer’s approach of equality of opportunity to the educational sphere, discussing two families of objections which can be viewed as limiting cases of John Roemer’s framework. In section 3, we expose our proposal of a normative evaluation scheme for the educational system. In section 4, some objections are addressed. In section 5 we discuss post-schooling policies that would be compatible with our approach. Section 6 concludes.

2 The aggregation procedure

2.1 Diversity and responsibility

Having agreed that a set of essential educational outcomes can be taken as the currency of educational justice, we could be tempted to immediately turn to the stage of scrutinizing possible aggregation and evaluation procedures. Concretely, it would consist of a discussion about the normative bases and the implications derived from the use of different SEFs. For example, we could investigate the implications of adopting a normative position which would recommend maximizing

the total sum of educational outcomes, regardless of the distribution of these outcomes (analogous to a utilitarian SWF, but in the space of educational outcomes). We could compare it with an outcome-egalitarian one, which would not give any importance to the total amount of education in a given society, but only to the extent to which the distribution is close to equality. Both could be compared with a maximin objective, or with combinations of all these. To sum up, by the use of different SEFs, various normative views could be studied and compared.

Sen (1992) correctly warns us that human diversity has to be taken into account in a credible analysis of justice - not only the diversity of observers (mentioned in the previous paragraph), but also the *diversity of the object itself*. Indeed, pupils differ in many senses: they have different preferences, beliefs and aspirations, as we have mentioned in the previous chapter. They are also differentially endowed in many dimensions: natural talent, social capital, family support, access to school resources (monetary and non-monetary). They exert different degrees of responsibility at school: some work hard; some do not. Some choose to spend more years studying; some spend only a few years. At the individual level, these features matter for the production of individual educational outcomes; at the aggregate level, they shape the distribution of educational achievements of a given society.

Inequalities of outcome variables, such as essential educational outcomes, are caused by ‘acceptable’ factors (say, differential effort exerted by pupils) and ‘unacceptable’ factors (say, differential capacity of parents to help children at school). For a normative goal to be legitimate, it has to take into account that while a fraction of the inequality is morally justified, the remaining fraction is unjustified. What was missing until this moment in our analysis was drawing a frontier between the acceptable and the unacceptable, otherwise the moral foundations of any of the SEFs commented above would run the risk of being too fragile. For example, it would be hard to justify on moral terms an objective function that simply recommended the maximization of educational outcomes if the inequalities encountered in a given allocation of educational outcomes were primarily caused by unacceptable factors. It would also be difficult, in turn, to defend an outcome-egalitarian objective function, if a hypothetical equal allocation of educational outcomes were to be obtained as a result of educational policies which induced high-performance pupils to exert less effort than they would have exerted otherwise, in such a way that low-performance kids are now able to reach the high-performance kids.

At a first sight, ‘intermediate’ SEFs - those whose inequality aversion parameters are such that they are placed somewhere between the

extreme cases, that is, the egalitarian and the sum-maximizer SEFs - would constitute a good compromise. But making such a statement is not enough for providing a minimally rigorous definition of educational justice. And it would not help us much in taking some distance from the “intuitionist” approach we are trying to avoid (cf. introduction).

To escape the limitations related to evaluating distributions only in terms of end-states or outcomes, regardless of individuals’ diversity (cf. first ‘crucial assumption’ in chapter 1) an alternative consists of conditioning the distribution of the attribute at stake in some sense in order to, among the characteristics which lead individuals to attain a given essential educational outcome, to distinguish the acceptable from the unacceptable ones.

2.2 Roemer’s equality of opportunity transposed to education

Equal-opportunity (“EOp”) ethics (Roemer, 1998) maintains that differences in the degree to which individuals achieve the goal in question that arise from their differential use of responsibility (or effort) are, morally speaking, perfectly all right. The partition of causes into circumstances and effort (or autonomous choice) is the central move that distinguishes Roemer’s EOp ethic from a strictly *outcome-egalitarian* conception of educational justice (and also from straight *maximin*). While the latter visions implicitly hold the individual responsible for nothing, EOp emphasizes that an individual has a claim against society only if he expended sufficiently high effort. But EOp has also to be distinguished, on the other extreme, from a merely *aggregative* normative position, which refrains - in a different way - from inquiring about the causes leading individuals to attain certain outcomes. Such a position implicitly attributes full responsibility to the individuals, ignoring their circumstances.

Pupils vary in their propensity of attaining some goal (e.g. get a certain score in math), due to circumstances - such as their race, or the socio-economic status of their parents. And the bedrock of the EOp is to consider that they should not be held accountable for these circumstances-related achievement differences. In order to equalize opportunities for young people to acquire essential educational outcomes, the schooling system should be organized in such a way that a pupil’s score in math, for example, is a function only (or at least mainly) of his effort and not (or at least not much) of his circumstances.

Following Roemer (1998), we could divide pupils into *types* assuming that all pupils *within a type* face a similar set of circumstances.

All the variation of educational outcomes (say, test scores) of pupils within a given type would then be assumed to be caused by differential personal effort, and given that the amount of effort expended is a choice made by the individuals, there should be no compensation for score inequalities within type. The *across-type* differentials, in turn, would require compensation, since they would be assumed to be caused by circumstances.¹

Putting together all the elements outlined in the previous chapter (which led us to defend the choice of essential educational outcomes as a relevant currency of educational justice) and in this section (namely, the requirement of conditioning the evaluation of outcomes on individuals' circumstances and choices), we conclude that a reasonable (general) normative goal in terms of educational justice consists of *equalizing opportunities for achieving essential educational outcomes*. Inequalities due to circumstances should be avoided *ex ante* or compensated for *ex post*, while inequalities due to choices should neither be avoided, nor compensated for.²

Roemer's concern is not so much about defining a normative goal (or an assessment scheme), but more about defining a generic 'policy mechanism'. For each quantile of effort, he defines the EOp problem as follows: "to find the policy φ that maximizes the minimum level of advantage [educational outcomes here], across all types, of individuals who expend the π^{th} degree of effort for their type." The associated objective function, adapted to our purposes (that is, as a SEF), is:

$$\max_{\varphi} \min_t s^t(\pi; \varphi^t) \quad (1)$$

where: $t = 1, \dots, T$ indicates the type to which the indi-

¹The characteristics and the behavior of *parents* - most of which are adults - have an impact on the learning of children. Some parents' attitude could be interpreted as being 'more responsible' towards their children's education (e.g., giving more support to children in their homework) than other parents' attitude. We do not believe children should gain or lose as a result of a compensatory policy according to the extent to which their parents' attitude is judged. For this reason, parental responsibility is out of the scope here. In chapters 4 and 6, for reasons explained there, parental education is used in the definition of types, that is, we assume parental education is a relevant circumstance.

²While we classify the discussion of this chapter as one about the aggregation procedure, it could also be viewed as part of that about the currency of justice. In the latter case, we would now be shifting from an evaluation set whose attributes are unconditional educational outcomes to one whose attributes are educational outcomes conditioned upon individuals' circumstances and individuals' choices or responsibility. It should also be mentioned that at this point of this dissertation we have already questioned the two first crucial assumptions of the welfarist perspective - focus on end-states and subjectivism. The third one - self-centeredness - is challenged in chapter 3.

vidual belongs, s is the score (representing essential educational outcomes), π represents the within-type quantile, φ is the education resource allocation policy.

Each quantile of effort provides a different policy. As a compromise solution, Roemer suggests giving the same weight to each quantile. If π was continuous, we would have the following SEF (with $t = 1, \dots, T$):

$$\max_{\varphi} \int_0^1 \min_t s^t(\pi; \varphi^t) d\pi \quad (2)$$

2.3 Two opposed objections

2.3.1 Social determinism

An important objection to equality of educational opportunity consists of saying that the distinction between circumstances and choices is not relevant or appropriate in education (De Villé, 2003; Pourtois, 2006). After all, is it reasonable to hold pupils accountable for their effort, given that they are not adults, but merely kids or teenagers? Can we consider them to be fully able to take autonomous and informed decisions? Can they be held totally accountable for important choices they have to make in their schooling years (e.g., allocation of their time between leisure vs. studying)?

Indeed during a large fraction of their school years, individuals cannot be said to be perfect judges for what is good for themselves; kids are possibly “economically myopic”, since they are unable to evaluate all the future benefits that are made available if he or she acquires education in the present time, and they make choices according to other, non-monetary, motivations, such as identification to their peers group (Akerlof and Kranton, 2002). Pushing the argument a little bit further, we would conclude, employing Roemer’s terminology, that circumstances account for virtually all the variability of educational outcomes. In other words, the distribution of education is socially pre-determined, such that the whole inequality is unacceptable. In such case, Roemer’s theory is not very helpful - we could trivially conclude that the policy objective consists of equalizing pupils’ scores (i.e., outcome-egalitarianism) or, alternatively, of maximizing scores of the pupil with the lowest score (i.e., straight maximin function). Fleurbaey (1995), for example, challenges the circumstances *versus* choice approach generally, and also more particularly - regarding education - and defends “equality of fundamental achievements” as the appropriate normative goal.

Indeed, if a society believes circumstances fully determine a pupil's achievements (that is, 'all are circumstances') then *each individual should be treated as a type* in Roemer's framework. In such case, the definition of types would then be a degenerate one, and Roemer's objective function would collapse into a straight maximin objective function (i.e., Roemer's maximand would converge to Rawls' maximand). The associated score-EOp allocation rule would then require the maximization of the scores of the pupil with the lowest performance.

$$\max_{\varphi} \min_{t, \pi} s^t(\pi; \varphi^t) \quad (3)$$

with: $i = 1, \dots, N$; and $t = i$.

Adopting 'social determinism' as a normative view is not exempt of difficulties. One of them is what we already briefly mentioned before, namely, that no attention is given to the process or causes that lead people to achieve their outcomes. Of course, the educational achievements of two individuals at the end of a particular educational stage may be different thanks to contrasting circumstances. However, the educational achievement gap might also be explained by differences in inputs which depend mainly on the behavior of students themselves, such as effort. Is it fair to 'punish' a pupil, through the reduction of the share of school resources she could be assigned, because her peers are not maximizing their own performance (thus moving society away from an egalitarian optimal allocation)? Accordingly, why should a 'lazy' student be rewarded, or compensated, at the expense of more brilliant or hard-working ones? It seems difficult to defend a policy of differential allocation of resources, intended to reduce educational achievement gaps, if one thinks those gaps are mainly due to differences in this sort of personal inputs under control of the individuals. No role is assigned to the *responsibility* of the individuals in the fully 'social deterministic' view.

Rawls's objective function - the maximin - is carefully justified as the outcome of a "veil of ignorance" mental experiment, an allocation rule that takes efficiency into account.³ However, maximin has been criticized for being too extreme, since *de facto* only the situation of the worst-off individual (or group) is valued - what is sometimes called a "dictatorship of the worst-off". To respect the maximin rule, any resource surplus that might exist must be allocated to the pupil whose performance is the worst, irrespectively of how large this surplus is and

³A truly Rawlsian view would not take educational outcomes as the relevant space, but would focus on primary goods.

of how many people would have to forgo this surplus (Fleurbaey, 1996; Sen, 1992).

In the general case, Roemer’s approach takes responsibility into account and avoids the problem of “dictatorship of the worst-off individual”, since its maximin runs *across types* and not simply across individuals. A priori, at each quantile a different type can play the role of the ‘dictator’, a role which eventually is never played fully, given that the weight of each quantile in the final averaging formula is marginal.

2.3.2 Meritocracy

Arguably, a fraction of educational achievements can be credited to the pupil itself. Acquiring knowledge and skills depends upon natural and social circumstances (talent, quality of family support etc.), but it also requires personal commitment and effort, and these variables can be considered to be under control of the individual to a certain extent. An extreme view, completely opposed to the ‘social determinism’ described above, would consider that a pupil’s achievements is fully determined by the effort she accomplished (that is, ‘all is effort’), in what we could classify as a ‘meritocratic view’.

A strict version of meritocracy would consider that indeed all educational inequality is actually due to differential effort or merit of individuals. An instrumental version, while admitting that educational inequality is not only due to differential effort or merit, would still advocate adopting meritocracy because of its presumable benefits: highly educated people (not restricted by any compensatory policy) could indeed contribute to the well-being (however defined) of the poorly educated individuals. In the same vein of Rawls’ difference principle, the reasoning would consist of considering educational inequality is not necessarily a bad thing because of the possible contingent benefits it might provide to the worse-off.

Within meritocracy, the whole inequality would be viewed as acceptable. Translating this view into Roemer’s objective function would mean *all individuals belong to the same type*. In such case, given that every individual faces similar circumstances, there is no need for any compensation. As for the objective function, an utilitarian-like one would be welcome. In comparing two distributions of educational outcomes, what would matter would be the ‘size of the cake’ (or the average performance). Inequality would possibly serve only the restricted role of being a tie breaker in cases where two distributions would have the same mean.⁴

⁴That is the Pigou-Dalton principle, which could be roughly stated as follows: for a

We have already exposed objections to both variations of the meritocratic view. Objections to strict meritocracy are those commented in the section on 'social determinism'. As for the objections to an instrumental version, the main point is that benefits accruing from highly-educated to poorly-educated can never be sufficient to compensate the latter, since cash income and education are not perfect substitutes (cf. dissertation's Introduction).

For the design of our proposal, we seriously take both families of objections to the EOp view (i.e., social determinism and meritocracy) into account and we try to cope with it by attributing to circumstances a weight which decreases with age.

3 Responsibility increasing with age

Roughly speaking, Roemer (1998) defends a policy which consists of an across-types maximin of the advantage at stake. It is a 'one-shot' policy, supposed to be applicable to various settings. However, we believe such an approach is not sufficient to address educational justice issues, due to the fact that schooling is a long, cumulative, and sequential process and concerns individuals of very different ages. Suppose, for example, that a compensatory policy is applied in the beginning of the schooling process, such that a distribution of the outcome which verifies equality of educational opportunity (EEOp) is implemented (i.e., a maximin of scores across types is obtained). It is not excluded that, for a number of reasons (e.g., differential provision of teacher quality), unacceptable inequalities could develop *after* that intervention, such that by the end of the schooling process, an unfair distribution of scores would be observed. The goal of EEOp would not have been attained.

Suppose, instead, that the focus is directed into the very end of the process. From a *policy viewpoint*, it would not be very satisfactory to care about people so late.⁵ In this case, the intervention would have to take the form of income redistribution, since individuals who are left behind cannot easily catch up with the winners of the 'schooling race' anymore (due to the cumulative nature of education, the gap may be too wide), nor are the former able to receive 'skill transfers' from the latter (given that skills are embodied in the individuals).

given "size of the cake" (or "total human capital stock" here) a less unequal distribution is preferred to a more unequal distribution.

⁵There is nothing wrong with Roemer's equality of opportunity approach as an *assessment device* - indeed at any moment it can be used to judge how effective previous policies had performed in deleting unacceptable inequalities. From a *policy viewpoint*, it would not be very satisfactory to care about people so late.

An income redistribution policy has a number of drawbacks (already discussed in previous chapters). Finally, an intervention which is made when individuals are already adults does not really place itself within the restricted scope we are assigning here to educational justice, but rather within the broader scope of general justice or macrojustice, and in such case it would have to be traded-off against policies of other spheres.

Thus, ideally, EEOp would consist of quasi-continuous and extensive interventions⁶ in the schooling process in order to make sure that outcomes which respect EEOp are achieved at each moment, recurrently setting up a ‘fair competition’ for the next stage.

Leaving aside the doubts concerning its feasibility - e.g., for sure, it would be extremely costly to gather information and implement compensations, for example, every single month -, such quasi-continuous and extensive intervention scheme would not be desirable for more fundamental reasons. First, it is important for pupils to gradually become aware that they are responsible and accountable for their own acts and choices (Trannoy, 1999). Second, not all the school subjects are essential - some of them can be seen as substitutable, or luxury, goods (cf. previous chapter). More essential subjects are those thought in the less advanced years of school, and early learning is crucial for future learning (Masterov and Heckman, 2007). Finally, and more importantly, the fraction of inequality attributed to responsibility needs not necessarily be fixed whatever the age of the individual. While it is clear that considering a 5 year-old pupil accountable for his efforts is not reasonable (cf. ‘social determinism’ critique), the claim loses strength when we are talking about a 14-15 year-old youngster, who lives, and is being further prepared to live, in societies where people are, at least partially, held accountable for their acts. For his own (future) benefit, he should be prepared to respond for his acts. The claim becomes even weaker when individuals are already young adults (cf. meritocracy critique).

We assume here that the ability to exert choice and responsibility grows with the age of the individuals. This assumption is implicitly accepted in many domains, for example, in determining that people up to a certain age (typically 16 or 18) do not have, neither the right to vote, nor full legal responsibility, while people above that age do have both. We are also assuming here that the first years at school are those which provide the individuals with the more basic, general skills - that is, the essential ones - one needs in order to lead a meaningful life, while the advanced grades provide more specific skills, to be chosen

⁶‘Extensive’ should be understood here as being ambitious in terms of compensation for unfair unfavorable circumstances.

by individuals depending on their aspirations and preferences.

The conclusion is that the extent of the compensation needs not be the same when we are talking about kids and when we are talking about young adults, just as it needs not be the same when we are talking about essential *versus* non-essential subjects. Thus the extent of the compensation shall not be constant, but rather declining with the age of individuals, and hence with the grade they are attending. In other words, we advocate a gradual increase of what we could call the ‘educational responsibility’ assigned to individuals.

The idea that emerges from our discussion is simply that the ‘educational responsibility’ assigned to individuals should increase with their age. There is nothing pre-determined regarding the ‘speed’ such increase should attain. What we advocate is that ‘educational responsibility’ should be 0% for very young kids and 100% for adults, with intermediary values throughout the schooling process.

3.1 A concrete illustration

One possible scheme for ‘implementation’ of our proposal would consist of assessing the extent to which EEOp is verified at key stages of the schooling process (and setting compensatory policies accordingly), with a gradual decrease of the role assumed to be played by circumstances in determining the outcome. As we said above, ‘educational responsibility’ should be 0% for very young kids and 100% for adults, with intermediary values in between. Assuming that, from stage 2 onwards, compensation has been fully implemented in the previous stage, we could have what follows:

1. **By the end of lower-primary** (say, when pupils are around 10 years old): circumstances play a prominent role in pupils’ performance and society does not wish to hold them accountable for their fortunes and misfortunes. Policies should be designed to provide extensive compensation.⁷
2. **By the end of upper-primary** (say, when pupils are around 14 years old): circumstances still play an important role in pupils’ performance, but individuals are older and so they understand - if not, they should start understanding - that they are partially responsible for their schooling performance. Compensation should still be quite extensive but less so than in stage 1.

⁷The associated policy needs not be defined only for the cohort that has just been assessed. The assessment of a given cohort in a given moment in time could serve as a basis for identifying at-risk kinds of pupils and to design policies for subsequent cohorts.

3. **By the end of high-school** (say, when pupils are around 17 years old): circumstances still matter, since individuals are not adults yet, but society would like to assign to individuals a further degree of educational responsibility. Compensation should be less extensive than in stage 2.⁸
4. **By the end of college studies** (say, when individuals are around 22 years old): Individuals are now already adults; circumstances fade away, and educational responsibility takes the prominent role. Merit becomes the only relevant attribute, for example, in the decisions regarding the selection of graduate students, or the allocation of candidates to jobs. The associated SEF could be analogous to an utilitarian one (that is, only caring about the sum total).

Educational justice cease to be relevant for individuals older than a certain threshold (say, 22). Most individuals go to the job market, a realm which is supposed to be regulated by its own criteria of justice. Graduate students who, so to speak, ‘stay in the educational system’, even after the age of 22, have chosen to do so, based on their own (now assumed to be genuine, sovereign) preferences - they are consuming a non-essential good, and educational justice has nothing to say about that. The relevant sphere of justice now becomes that of research or academia, another domain which is to be regulated by its own rules and principles of justice.

Society may now have particular concerns for those individuals whose skill levels are low, even with all the efforts of compensation made during the schooling process. In this case, income redistribution becomes a candidate for becoming an EOp instrument (but not EEOp anymore!), along with specific social policies such as, say, programs of education for adults, or the assignment of other forms of assets, a topic we turn to in section 5.

In any case, conditional/essential educational outcomes make sense as the currency of educational justice only until a certain stage, which we defined here at around the age 22 and the end of college. After that, other currencies of justice become relevant for these individuals, either in specific spheres of justice (health-care status, housing conditions etc.), or for general justice (income, assets, primary goods, real freedom etc.).

⁸The results of the assessment undertaken at this point could serve as a guideline, for example, to decide on what candidates should be admitted to colleges. In the light of this assessment, some forms of affirmative action may be legitimated, while others may not.

3.2 An example: illiterate (lazy) pupils

To make clear the content of our proposal, let us discuss one concrete example, namely: deciding on what policy to adopt whenever we find out that some pupils are not capable of performing a certain task or do not have a particular skill. For concreteness, let us assume that although they do not have any serious mental handicap, such pupils do not know how to read because they did not expend enough effort. Let us also assume that since they are not able to read, they are placed at the bottom quantile of the distribution of an essential educational outcome (reading skills).

Now, according to our proposal, if some pupils are illiterate at the age of 10 (or less), educational resources should be reallocated in such a way that they are provided all the conditions to learn how to read. Given that at this stage all are circumstances (hence: $T \rightarrow N$), the large social effort required to teach these pupils how to read is legitimate, whatever the possible consequential decrease in resources assigned to other pupils.

Let us imagine now there is a group of pupils who are illiterate when their age is somewhere between 10 and 22. We cannot say anything in terms of policy without knowing how these pupils perform with respect to pupils of other types who belong to the same quantile of within-type performance. If illiteracy is affecting a similar share of pupils of other types, then no particular effort should be undertaken in order to raise the achievements of the former type. However, if illiteracy is a problem exclusively affecting pupils of a given type (say, those whose parents are poorly-educated), then more resources will have to be allocated to those pupils in order to raise their reading skills. Clearly, the relative performance across-types matters a lot, as well as the precise definition of types.

A third situation would consist of verifying illiteracy among individuals who are 22 or older. The policy prescription would not call for any compensation for these individuals. At this stage, everybody belongs to the same type - as far as educational fairness is concerned -, so that those who are illiterate (and so belong to the bottom quantiles of performance), made the choice of not making efforts in order to learn how to read, and they are deemed responsible for that. It is not society's duty anymore to make any further effort towards them.⁹

⁹In section 5 we talk about 'forgiveness' coming about beyond the educational sphere.

4 Possible obstacles

4.1 What about cognitive handicaps?

What if some pupils do not know how to read, not because they *chose* not to make efforts, but because they simply *cannot* learn how to read, that is, their genetic endowment (the most basic circumstance) does not allow them to do so.

In our view, properly addressing this issue would lead us to a very controversial discussion about how to define the types. As such, this problem does not regard step 4 of our proposal: at that point, types actually need not be defined, since all individuals (including handicapped) are assumed to belong to the same type, as far as educational policy is concerned. Other forms of compensation might intervene *ex post*, beyond the educational system, both if a person is illiterate due to choice or to circumstance (cf. section 5).

The problem does not regard step 1 either, where each individual is assumed to be a type ($T \rightarrow N$) and a straight maximin function is the recommended aggregation procedure. Our proposal pushes society to make all possible efforts such that pupils learn how to read.¹⁰

As for steps 2 and 3, an extreme solution would consist of creating a type labeled ‘handicapped’ or ‘untalented’ and then including in this category all individuals who cannot read due to some handicap. At any given quantile of the distribution of score, individuals belonging to this group would almost surely be the worst-off when compared to individuals of other groups, so that the recommended policy, according to our proposal, for all individuals below 22 years old would consist of allocating more resources to them. That situation would constitute, in a sense, a ‘dictatorship of the untalented’. Morally, there is nothing wrong with such a definition of types and with its implication. We would follow Roemer on this topic: it is not intrinsically incorrect if a democratic society decides to give priority to handicapped, defining them as a type, and allocating to them a considerable amount of educational resources.¹¹

However, another possibility seems to be more reasonable, which consists of defining types according to other criteria, such as parental education, ethnic origin, place of birth etc.. In this case, handicapped pupils will most probably find themselves among the worst-off pupils

¹⁰In this chapter, we assume a segmented-justice viewpoint and then try to spell out sensible rules for allocating educational resources, taking the issue of the size of the educational budget as given. However, it is clear that the decision regarding the fraction of the overall budget which should be devoted to education is also an important one. See chapter 1 for some considerations about the partition of the budget.

¹¹It should be recalled that there is no ‘scientific method’ for defining the types.

within each type. Consequently, the eventual optimal allocation of educational resources will depend upon other sections of the performance distribution (where differential performance across types will be found) and not only upon the lower quantiles of effort where handicapped people are found. In such case, the weight of cognitively handicapped in the determination of the optimal policy will be lower than in the case where an ‘untalented’ type is defined.

4.2 How to deal with drop outs?

We have not made any comment so far on the possibility that pupils drop out during the schooling process and on the implications this occurrence might have on the adequacy of our proposal.

We should distinguish two situations. First, suppose the probability of dropping out is orthogonal to the types. In this case, there is no reason to fear that our proposal will be unfair. From a EEOP viewpoint, if pupils decide to abandon the school and if the probability of doing so is similar across types, then dropouts could be viewed as those who chose to exert less effort within each type. Although we may be in face of a serious social problem, this kind of drop out phenomenon does not call for a compensation on the grounds of educational fairness. Our proposal is not affected.

The second situation is one in which the probability of quitting school increases with the age and, more importantly, that it is unevenly distributed across types of pupils. Indeed, in some countries, pupils who do not attain a given performance are retained by their teachers and have to repeat the same grade. Typically, repeated failure diminishes a pupil’s prospects of finishing a given schooling stage and of acquiring the respective certificate, and it also increases the opportunity costs of staying at school. As a result, some pupils quit schools. Is our proposal affected in the face of this problem? After all, how can we be so tolerant with regards to inequality at advanced stages of the schooling process if some types of pupils face more risks than others at preliminary stages? We believe that the *appropriateness of our proposal tends to be reinforced* in the face of: (i) an uneven distribution of the drop out probability across types, and (ii) a positive correlation between age and drop out probability. This is so especially because of the emphasis we assigned to *compensation at early stages*. Intervening at an early stage (say, at 10) might enhance the probability of staying at school since children of at-risk types will be those who will benefit the most from the ambitious reallocations we recommend for pupils of that age.¹² The preventive nature of this early and

¹²This holds if drop out is correlated with the quality of education received, an issue to

ambitious intervention is precisely what allows us to be more tolerant with respect to performance inequality and drop out at more advanced stages.

Lastly, we should say that we have assumed in this subsection that compulsory education laws are indeed enforceable, an assumption which is reasonable for developed countries. If this is the case, drop out is a phenomenon that will occur only at later stages of the schooling process. And that attenuates the importance of drop out as an objection to our proposal, since in advanced stages, there is more room for personal choice. However, developing countries might face difficulties in enforcing compulsory education laws. In that case, reducing dropout rates becomes extremely important, *inter alia*, for fairness reasons. We may be tempted to believe that reducing dropout rates is a problem which has to be dealt with with priority, that is, that keeping pupils at school is more important than deciding on how to distribute available educational resources among them. We believe, instead, that while specific policies aimed at keeping pupils at school are undoubtedly important, there is no reason why policy makers - especially those of countries with an intermediate level of development - should not be also concerned about the distribution of good-quality education, among other reasons, because raising the quality of education of the worse-off types might contribute to decrease drop outs (more on this in chapters 3 and 4).

5 Post-schooling policies

5.1 EEOP not achieved requires further compensation

Until this moment, we have been very optimistic with regards to the effectiveness of the EEOP policies. Indeed, at each stage, we have implicitly assumed that, through the application of Roemer's algorithm appropriately parameterized in each stage, it was possible, not only to correctly identify the advantaged and the disadvantaged pupils, but also to implement an effective compensation scheme, accounting for all the unacceptable inequalities.

But what if the compensation is not extensive enough at some point? What if we have doubts on the effectiveness of previous compensations? If there are reasons to believe that no compensation at all has been performed at a given moment, then it makes sense to turn to the extreme case consisting of fully compensating individuals, that

which some attention is given in chapter 3.

is, to apply at such moment the version of the algorithm we suggested for individuals at the age of 10 ($T \rightarrow N$; SEF = straight maximin).

Trickier than such an extreme situation (EEOp not verified at all) would be to decide about how to set up the proportion of unacceptable inequality in those cases where there are reasons to believe that EEOp has been verified ‘to a certain extent’ in previous stages. If we face these intermediate situations, we believe there are at least two possible paths, which open interesting research possibilities for empirical applications (cf. chapter 4):

1. To define an intermediate number of types ($1 < T < n$) and then apply Roemer’s algorithm. In other words, that would mean applying for students of any age some variation of the policy we have recommended for students at steps 2 or 3 (and whose parameters are not precisely specified in this chapter). The challenge, in this case, would be how to set up a specific SEF and its parameters, avoiding ‘intuitionism’.
2. To set $T \rightarrow N$ (at the limit, treating each individual as a type), but then, instead of using a maximin aggregation function, to employ some less extreme SEF, such as the usual CES functions (Moreno-Ternero, 2005)¹³, which would imply less redistribution than in the case of $T \rightarrow N$ with straight maximin. Once again, the risk of falling back into ‘intuitionism’ is not excluded.

However well-designed the scheme, and however generous the redistribution of resources aimed at equalizing educational opportunities, in ‘real-world implementation’, unfair inequality of educational opportunities will probably remain (due to uncertainty, lack of information etc.). Some individuals will then arrive at adulthood facing a better life prospect before them than others - and this gap cannot be credibly attributed only to differential exercise of effort or responsibility. Further compensation will be required, beyond the educational sphere.

5.2 EEOp achieved, and still we forgive people

Young adults may regret some decisions they made when they were kids or teenagers and which eventually led them to acquire what

¹³Moreno-Ternero (2005) introduces an alternative mechanism to implement Roemer’s EOp, but whose aim is not to maximin some advantage across types, but instead to minimize the across-types inequality over such advantage, according to some inequality index (not specified). Such mechanism is presented as a generalization of Roemer’s algorithm. Furthermore, the author claims the mechanism he proposes is more in line even with Roemer’s own intuition concerning EOp.

they now consider to be a relatively low level of educational achievement. Even if in this case the gap can be attributed to differential ‘educational responsibility’ (i.e., equality of educational opportunity *does have been achieved*), society could still be concerned by the life prospects of these people and be willing to give them, so to speak, “a second chance”.

One way out here would be to say that the object of our study is not equality of opportunity at the general level, and that our proposal adequate to deal with the issue at stake here, which is equality of *educational* opportunity. But it is also logical to provide at least some rough intuition on how some post-schooling policies could be compatible with our approach.

Education, or human capital, is a form of asset for individuals. Both for morally acceptable and for morally unacceptable reasons, at early adulthood some individuals will have accumulated more of this kind of asset, while some others will have accumulated less. On the one hand, for the reasons explained before, it becomes impossible to redistribute this asset when individuals are, say, 22. On the other hand, while in principle it is possible to compensate this gap through income redistribution, we know that, for a number of reasons, in practice this is unfeasible (e.g., for efficiency concerns) and insufficient (e.g., given that education, or human capital, has a value in itself, a value which is not substitutable with other goods such as cash income).

If our aim is “not simply to assist those who lose out through accident or misfortune (although this must be done), but instead to put all citizens in a position to manage their own affairs and to take part in social cooperation” (Rawls, 1999, p. xv), such that the solution is neither redistributing education, nor redistributing cash income, what alternative is left then? An interesting proposal has been advanced by Le Grand (2003), who claims that we have to provide young adults (especially those who are socially worst-off) with other kinds of assets, such as financial capital, that will empower them to face life with more opportunities than they would otherwise. He defends an “asset-based egalitarianism”, according to which each individual has the right to receive a capital grant - a “demogrant” - when he or she attains adulthood (at age 18 or 21). The amount is expected to be invested in some fruitful way - in funding tuition fees or to start paying for a house or to start up a small business. The aims are to encourage all individuals - even those with a low educational level or early dropouts - to “take responsibility for their own lives” and to “develop from a passive to an active citizen”.

We will not make any further comment about this proposal or

about similar ones¹⁴, because such discussion goes beyond the scope of our research objectives. We would just like to mention it as a possible logical complement of the EEOp proposal we have outlined in this section 3, which can be understood as the way by which our mesojustice block can be integrated into a macrojustice building.

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The point we want to make in this section 5 is that we would suggest to turn to some kind of post-schooling compensation scheme that will act in the sense of correcting the inequality of educational opportunities that was not erased by the previous policies (if EEOp has not been achieved), or to provide a second-chance to people, even when EEOp has been achieved.

6 Conclusions

As mentioned before, we are interested in setting up a conceptually reasonable and empirically useful definition of educational justice. The result we obtain is related to policy making and, possibly, to assessment (cf. chapter 4). It materializes in the proposal we have exposed in section 3, which is inspired by:

1. Sen (1985, 1992): in the choice of an *equalisandum* which is simultaneously a functioning (achievement) and a determinant of capabilities (freedom set);
2. Roemer (1998): in adopting his EOp framework in order to take into account the causes underlying outcomes, and accommodating to it specific features of the educational sector;
3. Fleurbaey (1995); Trannoy (1999): in the adaptation of their “equality of fundamental achievements” proposal; expressed in Roemer’s terms, while their proposal would correspond with assuming 0% responsibility up to a certain age and 100% after that, ours assigns to individuals a gradually increasing role of educational responsibility.

In the introduction, we said we would try to overcome the usual intuitionist or neutral approach, trying to come up with a justified specific normative view. We believe we have done so to some extent, in the form of our proposal, in which a conceptually precise normative

¹⁴Proposals include, among others, regularly granting an unconditional basic income to each adult, as defended by Philippe Van Parijs (1995).

guideline is provided: ‘educational responsibility’ assigned to individuals should increase as they grow up. Moreover, some specific parameters have been set up *a priori*, and unambiguously: $T \rightarrow N$ for very young kids; $T = 1$ for adults. That is, we know where the function interrelating educational responsibility and age starts and where it finishes. Having said that, the parameterization of intermediate stages remains imprecise for the moment: indeed there is no pre-determined form for such function. Further research is needed in order to (try to) provide more preciseness for such intermediary stages.

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