1. Introduction

Economic inequality has traditionally been conceived as inequality of outcomes, measuring income, consumption or wealth differences among individuals or families. However, a considerable controversy still surrounds the main sources of economic inequalities; the extent to which they can affect other outcomes; whether or not these disparities matter.

In the last decade, this debate has increasingly shifted from inequality of outcome to equality of opportunity. This approach paid greater attention to social and economic circumstances which hinder individuals from competing at the same starting level, and to the real opportunities people have to pursue their own life plans and objectives.

Among others, Amartya Sen and John Roemer are considered the authors who made a significant contribution to the debate, even though they started from different premises, and reached rather different conclusions. According to Sen, individual overall advantage should not be assessed in terms of resources or utility but in terms of the person’s capability to do things he or she has reason to value. Various set of contingencies, including personal characteristics, social and economic circumstances, can affect the real opportunities people have, generating variations in the conversion process of income and economic resources into achievements. These sources of variations are crucial in understanding poverty and inequality and should be taken into account when designing public policy.
addressed to it.

Similarly, John Roemer triggered an engaging debate on this issue in his book *Equality of Opportunity* (1998), remarking that individuals should not be held responsible for those circumstances which are clearly beyond their control (such as gender or race). Inequality of outcomes should reflect only differences due to individual choices, like effort, or different talent. Unequal opportunities caused by circumstances at birth, broadly recognized as unfair by people, should be reduced or eliminated.

In this paper, I will compare and contrast the two approaches to the problem, pointing out analogies and differences between Roemer and Sen’s views. Section two will be devoted to briefly discuss Roemer’s equality of opportunity, while in section three I will analyse Sen’s equality of capabilities. In section four, I will compare and contrast the two theories. Section five will conclude the paper.

## 2. Equality of opportunity

Drawing on Arneson’s earlier formulation (Arneson 1989), Roemer (1998) further developed and formalised the idea of equal opportunity in the quest for well-being. According to him, success in life should not depend on birth circumstances. Rather, it should centre exclusively on people’s autonomous choices, effort and personal skills. Features such as gender, race or social background, which are beyond the individual’s control, cause a set of morally unacceptable inequalities. With reference to outcome (which he defines as advantage), Roemer points out how personal commitment and individual responsibility play a major role in performing the actions required to achieve well-being. In a society where equality of opportunity is the rule, relevant outcomes (including income, wage-earnings capacity and life expectancy) are redistributed regardless of the circumstances already mentioned. Therefore, effort is the residual which explains outcome differences. If this is not the case, as the existence of profound disparities observed in most societies testify, an equal opportunity policy should be oriented to level the playing field among people.3

3 Roemer recently suggested (2009) the possibility to extend the equality-of-opportunity idea to intergenerational and global equality. In the first case, the need for equality is based on the assumption that individual welfare should not be affected by the date at which the individual is born. Thus, a sustainable path of development should allow maximizing the welfare level that can be enjoyed by every generation. In the second case, according to cosmopolitanism (Pogge 2002), inequalities among individuals of different nationalities shall be considered morally arbitrary because birthplace is also a circumstance beyond individual responsibility.

Roemer specifically assumes that the outcome observed \( u \) is determined by a set of circumstances \( c \), affecting a certain group of people or “type” \( t \); the effort \( e \) which comprises the actions people take and for which they are responsible; the set of policies \( p \) used to equalize opportunities, so that it is possible to write \( u(c, e, p) \).

For instance, if wage-earning capacity is the objective (e.g. “the condition of individuals whose acquisition we desire to equalize opportunities for”, Roemer et al. 2003, p. 541), such a capacity certainly depends on the individual’s effort as well as on circumstances like the parental socioeconomic status – loosely defined according to one’s parents’ education level – which may play a relevant role in improving this capacity. A policy aimed to provide equal opportunities could involve investments in educational resources, so that future earning capacity of different individuals might be equalized. Similarly, if life expectancy is the objective, effort could be defined as the individual’s commitment to maintaining a healthy lifestyle in accordance with the \( t \) group specific features (if gender is the relevant circumstance, women might have healthier life-styles than men). In this case, a type-specific policy aiming to equalize life expectancy could entail health care campaigns specifically directed towards the more disadvantaged group, in order to raise their life expectancy to healthy life-style levels for each type. What matters here is that the distribution of effort among individuals of type \( t \) is a characteristic of the type, not of any individual.

When putting the theory into operation, the most difficult problem concerns the possibility to estimate individual effort which is the result of a process of individual preference maximization, and therefore not easily observable. As Hild and Voorhoeve (2004) point out, Roemer’s definition and measurement of effort varied through the years. As already said, in his 1998 book Roemer assumes that inequalities are due to different choices in terms of the relative effort, given the circumstances individuals experience. Therefore, “individuals should be held accountable for their degrees of effort but not their levels of effort […] I say it is morally wrong to hold a person accountable for not doing something that it would have been unreasonable for a person in his circumstances to have done” (Roemer, 1998, p.18).

This conception has been recently modified (see Roemer 2009 and Roemer et al. 2003). According to the new version, individuals relative effort not only is
determined by choice-related variables, but also by all factors which determine individuals’ rank in their type’s outcome distribution, including personal skills and talents, as well as good luck. What matters to Roemer is finding an “inter-type-comparable effort measure” (Roemer et al. 2003, p. 543).

The underlying idea is that individuals of different types who occupy the same rank in their outcomes distribution functions engage with their duties at the same level and thus, they behave in an equally responsible manner even if their absolute levels of effort are different. It would not be fair, for instance, to compare school performances by two pupils who grew up in very different living contexts. Rather, their levels of effort should be compared with others’ experiencing the same set of family circumstances. If the two children had the same propensity to apply themselves, they should receive equal rewards or advantages, while if one of them is a member of a disadvantaged group this will affect his effort level. In other words, the distribution of effort becomes itself a characteristics of the type, not of the children. Roemer (2002) proposes as a measure of the relevant degree of effort the quantile of the effort distribution for the type an individual belongs to.

Two general approaches have been suggested for equalizing the advantage of all individuals across types. Roemer suggests a mean-of-mins or sum-of-mins rule, which states that the selected policy $p$ within the possible social options $p \in \Phi$ should maximize the minimum level of outcome ($U$) achieved by individuals ($i$) in the same circumstances ($I = 1…T$), given their diverse effort levels ($j=1,…,N$).

$$\max_{p \in \Phi} \sum_{j=1}^{N} \min_{i \in I} U_i^j(x)$$

A different approach, defined by Dirk van de Gaer as min-of-means or min-of-sums rule (Van de Gaer, 1993; see also Kranick, 1996; Ok and Kranick, 1998, Bossert et al. 1999), focuses on the set of outcome available to the members of each type (their opportunity set). It takes the average outcome of each type and requires equating the set of opportunities, maximizing the most disadvantaged one:

$$\max_{p \in \Phi} \sum_{j=1}^{N} \min_{i \in I} U_i^j(x)$$

The two rules are very similar and Roemer (2002, p. 459) considers them as two possible options among the several available. In fact, there is an apparent relation between the two. The opportunity set held by an individual in specific circumstances is associated to a vector of possible outcomes. Their achievement varies according to the diverse effort levels the individual engages with. So, if the same group is the most disadvantaged at each effort level, the two rules will lead to
the same policy $p$.

However, Ooghe, Schokkaert and Van de Gaer (2007) point out how the differences between the rules go beyond formal elements. The “compensating outcome” approach suggested by Roemer argues that equalizing opportunities entails equalizing the individual outcome. In fact, this latter mirrors differences among types and circumstances which are beyond individual control — and responsibility. In this interpretation, equalizing opportunities means also accepting inequalities in the individual outcome, if they derive from a different degree of effort. In other words, given equality of opportunity, the same degree of effort should produce equal individual outcomes. When this does not occur, individuals should be compensated, only if circumstances differ. What matters here is therefore equality among groups, not within the same group.

On the other hand, in Van de Gaer’s “compensating sets” approach compensation refers to the different opportunity sets available to individuals and therefore aims to equalize the value of these sets. However, as Ooghe, Schokkaert and Van de Gaer show, they have a very different ethical inspiration and can lead to different results in terms of policy prescriptions (see also Moreno-Ternero, 2007).

2.1. Some open issues about equality of opportunity

The equality of opportunity is currently one of the most supported conception of distributive justice and has greatly influenced the debate in egalitarian political philosophy. The literature about the measurement of inequality of opportunity, both at theoretical and empirical level, flourished during the recent years and produced very interesting results (see among others, Ruiz Castillo, 2003; Peragine, 2004, 2005; Savaglio e Vannucci, 2007; Lefranc, Pistolesi and Trannoy, 2006). Beside these remarkable results, there are also some unresolved questions, as it reasonable to expect. I would like to raise four of these issues in the current section.

The first issue concerns a possible overlapping between opportunities and circumstances. If equality of opportunity was an achieved and well established fact, this would entail an equal set of circumstances. Therefore, according to Roemer, outcome inequalities would be solely due to different levels of effort and thus being considered morally acceptable and fair. On the contrary, unrelenting and broad inequalities affecting modern societies seem to demonstrate that unequal opportunities deriving from a diverse set of circumstances persist. These latter, in turn, will originate different outcome even in case of equal levels of effort. In such cases, if we can observe circumstances and outcomes but we cannot measure effort, how can we distinguish between equality and inequality? By and large,
opportunities and circumstances tend to overlap the more we move from the conceptual to the empirical sphere.

This overlapping, which can generate major consequences on estimation as we shall consider later, is not neutral also at conceptual level. In the first place, other circumstances being equal, every possible outcome level is theoretically compatible with an equality-of-opportunity principle. In other words, inequality of opportunity is consistent with every possible unequal outcome. Moreover, in most cases circumstances like gender, race or family background cannot be changed. Therefore, how can we guarantee equality of opportunity in these cases? What kind of interventions can be implemented to restore it? Are there any policies capable of accounting for different circumstances and compensating for them? Finally, is it always possible to justify such policies?

Consider the examples represented in figure 1. Suppose that there are only two types, A and B, the former experiencing better circumstances. As already pointed out, we can observe their outcome but not their effort level. Let us also assume, as in the first row, that the outcomes observed are equal. Since circumstances are different, we can also infer that the effort levels in each group are different and, more specifically, the more advantaged certainly put less effort into his action. If we take equal opportunity seriously, we should reward the B individual for his higher effort which allowed him to achieve a higher outcome despite his adverse circumstances. Or, alternatively, should we penalize the more advantaged person for his lower level of effort?

**Figure 1. Equality of Opportunity. A Simple Example.**

<table>
<thead>
<tr>
<th>Circumstances</th>
<th>Effort</th>
<th>Outcome</th>
<th>Policy Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>$C_A &gt; C_B$</td>
<td>$e_A &lt; e_B$</td>
<td>$u_A = u_B$</td>
<td>Shall we compensate B for the greater effort or penalize A for most favorable circumstances?</td>
</tr>
<tr>
<td>$C_A &gt; C_B$</td>
<td>$e_A &gt; e_B$</td>
<td>$e_B \geq e_A$</td>
<td>Unequal outcome is legitimate. But what owes to c and what to e? Shall we compensate B or penalize A?</td>
</tr>
<tr>
<td>$C_A &gt; C_B$</td>
<td>$e_A \geq e_B$</td>
<td>$u_A &lt; u_B$</td>
<td>Shall we give an additional reward to B? How much additional effort is required for compensating the less favorable circumstances?</td>
</tr>
</tbody>
</table>

Let us consider the second row where the more advantaged person A gets the better outcome. At a glance, this may seem legitimate because of his higher effort level. However, we can observe that A also experiences better circumstances. How then can we distinguish between higher effort and better circumstances when
accounting for a better performance? Alternatively, consider the case where A put less effort into his action. We should again compensate B for his higher effort, even though this latter is not sufficient to make up for adverse circumstances and to achieve a better outcome. The third case, described in the last row, has similar implications in terms of policy.

Whether the outcome is earning capacities, school performances or life expectancy, we always end up with paradoxical conclusions, at least unlikely to sustain or justify. Of course, we can award scholarships to a pupil with outstanding performances and a bad family background. But, is it right to penalize a pupil with the same outstanding performances and a good family background, if all this does not depend on higher effort? What if his lower effort were due to his greater talent?

Two reasons account for this problem, I think. First, the overlap between opportunities (non-observable) and effort measurement in the relation between circumstances and outcomes. Second, the division into groups or types, namely the criteria to be used. If they are defined according to outcome differences, how can we be sure B is actually more disadvantaged than A? What if such disadvantage depended on a lower effort level? Consider women’s consistently low wage levels in the labor market. Among the diverse reasons provided to explain it in the literature (for instance, gender discrimination), sometimes the low effort put into work is also used to account for it. How can we measure such effort, if the type taken into consideration is itself defined according to gender-based prejudices affecting the type’s average outcomes? Labor economics literature and feminist economics describes gender discrimination on labor market as a consequence of stereotypes and lack of signals which allow to identify the actual level of productivity. Thus explained, they implicitly reaffirm women inequalities in terms of opportunity as well as of outcome, paying no attention to their effort. How is it possible to intervene in these cases?

A second issue concerns where the “starting gate” should be placed, i.e. how to define the circumstances from which to level the playing field, in order to achieve equality of opportunity. What sort of differences should not be levelled off? This problem links to a broader issue, namely what circumstances must be preserved in order to achieve equality of opportunity. Who selects them? Which among them are actually beyond individual control? A wide range of answers is possible. The minimal version includes in the list only gender, race or religion. Broader lists also include social and family background. Finally, the maximal version takes into account every difference linked to birth and chance, considering choices and preferences the only morally legitimate sources of outcome inequalities.4

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4 Hild and Voorhoeve (2004) define the three inclusion levels as right-liberal, left-liberal and socialist catalogue. See also Cohen (2001) and Kolm (2001).
In short, distinguishing between circumstances and actual effort is not an empirical question but a morally relevant action. In addition to this, such distinction is often based on pre-existing unequal opportunities. Is talent a morally justified basis for accepting outcome differences? Does it originate from a natural lottery? Is it a genetic factor? Does it depend on environmental circumstances?

A third important issue regarding effort has been pointed out by Fleurbaey (1998). According to him, Roemer’s definition of relative effort can allow to separate morally relevant factors (i.e. effort) from morally irrelevant ones (i.e. circumstances such as race or gender) if and only if the former are not statistically correlated to the latter. Looking at the life expectancy example, one may argue that a different disposition towards a healthy lifestyle is significantly correlated with the information available to each group on the risks associated to their actual lifestyle. This refers not only to the amount of information, but also to its appropriateness.

This point is of paramount importance when we put the equality of opportunity theory into operation. For instance, a recurrent criterion for partitioning population into groups or types is parents’ education as a proxy for the individual’s family and social background, thus defining the circumstances. The implicit assumption is that the residual (that is, the effort) accounts for different outcome levels. One may notice that genetic differences, talents and effort are correlated with the parents’ education level – as they usually are (Saunders 1996). A problem of endogeneity immediately arise when distinguishing opportunity, effort and circumstances from outcomes is difficult. Such a problem is more relevant with reference to adult people while is relatively less serious in case of children for whom is reasonable to assume that their access to opportunities (not to outcome) is independent to the effort.

Finally, Roemer’s version of equality of opportunity assumes that what has to be levelled off is an average outcome - in terms of resources, education levels or life expectancy – for each type. However, as pointed out earlier, there is a trade-off between number of cells, and thus accuracy of type’s definition, and sample size and therefore, the sampling variance within each cell which depends on the number of observations. As Ferreira and Gignoux notice (2008), this may lead to an over-estimation of inequality of opportunity. To avoid this, the samples used should be representative enough to allow an accurate types’ specification. Alternatively, the authors suggest integrating non-parametric analyses with parametric estimations. This allows them to specify a lower-bound estimate of inequality of opportunity, rather than a single index.
3. Equality of capability

In this section I will briefly consider Amartya Sen’s equality of capability before considering in section 4 some interesting analogies with Roemer’s equality of opportunity, as well as their significant differences.

Since the first appearance of *Commodities and Capabilities* in 1985, many scholars from a broad range of disciplines have been analysing and expanding Sen’s capability approach, including the distinguished contributions of Martha Nussbaum. Nowadays, the existing literature on the subject is immense, involving very diverse fields of investigation. Even if it took many years to account for concepts like *functionings* or *capabilities*, whose groundbreaking value often remained ambiguous to many, these expressions are now part of the vocabulary of economists and philosophers. Therefore, I will just make a brief overview of the basic concepts of this approach.

According to Sen, “a functioning is an achievement, whereas a capability is the ability to achieve. Functionings are, in a sense, more directly related to living conditions since they are different aspects of living conditions. Capabilities, in contrast, are notions of freedom in the positive sense: what real opportunities you have regarding the life you may lead” (Sen 1987, p. 36). Sen suggests replacing access to resources with a broader notion of well-being, namely the one including “what an individual can do and can be.” In this sense, individual well-being does not depend exclusively on the resources available to people. Rather, the definition includes their ability to transform these resources into valuable achievements. A capability set consists of the possible valuable achievements, whereas functionings describe those actually achieved.

The capability approach does not simply contrast with the more traditional income-based approach, but encompasses it. Material resources such as income are of paramount importance in determining well-being, but they are not a sufficient metric. According to Sen, a complete definition of well-being also includes achievements whose value cannot be determined by money. Sen lists among them an adequate education; a good health and nourishment level; bodily integrity against any form of violent assault; control over one’s material, political and cultural environment.

Another important distinction in Sen’s argument lies between the notion of *standard of living*, as opposed to *well-being*. The first refers to what has a direct impact on individuals personal lives. The second takes into account all those aspects contributing to individual well-being, even though they are not directly linked to it. In this sense, adequate nourishment falls into the first category, whereas working actively for famine relief falls into the second one. Linked to this distinction is the notion of *agency*. Sen defines it as people’s actual possibility and
capability to pursue tasks they have reason to value, whether or not they may affect their standard of living.

Finally, the concept of freedom is pivotal when looking at Sen’s theory. In his approach, freedom is above all an individual’s actual ability to choose freely what to do, which tasks to pursue, in short what kind of life is worth living. In this sense, freedom is substantive rather than instrumental, thus giving body and value to the idea of development and well-being.

It would be appropriate to look at people’s standards of living as a multi-dimensional phenomenon, even when our attention is directed to very specific aspects of it – for instance, to a single agency possibility, or to a restricted set of functionings. In addition to the complex definition of well-being already explained, Sen’s most outstanding contribution to the problem is to offer a unifying theoretical framework for approaching welfare economics, so that a wide range of issues traditionally separated can be brought together.

Of course, there are some objective difficulties when trying to operationalize this complex and challenging theoretical framework, namely in formulating algorithms, measures and policies based on it and setting up tools to assess and control their efficacy. It is also true that in the last ten years a growing body of empirical studies referring to the capability approach have developed and interesting methodologies and tools suggested.

3.1. Some open issues about equality of capabilities

Sen’s capability approach has been given a huge attention and a broad consensus. Most scholars appreciate its innovative nature, offering an original and broad perspective for conceptualizing and understanding poverty, inequality and development; its attempt to shift the attention from the means of living to the actual opportunities of living; its ability to bring together aspects such as freedom or agency that were hitherto excluded from (or inadequately formulated in) traditional approaches to welfare economics; its capacity to represent a genuine alternative paradigm for measuring well-being, compared to standard income-based methods. However, other authors consider these innovations as weak points of this theoretical framework, for several reasons.

Critics argue that Sen’s approach is too complex, on one hand, and on the other not enough defined, leaving unresolved specific normative questions. Sen himself acknowledges that the capability approach is not aimed to be a normative theory on social justice, even though it can serve as an important constituent for it (Sen, 1995, 2004; see also Robeyns, 2005). This kind of theories would generally require i) an aggregative principle from individual well-being to that of society as a whole;
ii) a procedure to formulate the method, which the capability approach does not specify\(^5\). Despite its underspecified nature, the capability approach still maintain its relevance for assessing and comparing social disparities. In his new book *The Idea of Justice* (Sen, 2009), Sen has recently argued that, above all, a theory of justice should aim to reduce grave iniquities in the world, rather than wonder about what a hypothetical perfectly just society could or should be like. While it is almost impossible to agree on what perfect justice is, it is feasible to acknowledge actual injustices, like slavery, women’s subjugation, famine and poverty. In these cases, according to Sen, we must intervene and the capability approach can offer an important informational focus for assessing freedom and justice.

There are, however, other important open issues to be considered. One could be which capabilities should be included, and whether there should be a scale of priorities. Sen considers the capability approach as a flexible pattern, open to diverse conceptions of good, justice and advantage. Therefore, it is not appropriate to make an *apriori* list. Rather, one should be built according to any given society’s culture and values, thus varying on the basis of time and space.

On the contrary, Nussbaum strongly argues in favour of a universal list of capabilities. She identifies ten central human capabilities, each of which is at same level and cannot be replaced or compensated by anything else. This list should be a founding principle in the constitution of each Country, which should promote and defend it for every individual in every society. However, there is still controversy among scholars over the procedure to be used in order to define such a list\(^6\).

Despite the difficulties, the recent experience conducted by the Equality and Human Rights Commission in the UK testifies the concrete possibility to implement the capability approach and formulate a policy framework substantially based on it\(^7\). In particular, this Commission defined a set of ten central and valuable

\(^5\) Martha Nussbaum’s contributions (2000, 2003) can be seen as a step towards a theory of justice based on the capability approach by specifying a list of human capabilities.

\(^6\) Drawing on the notion of basic needs, Alkire (2002) suggests to start with a sufficiently complete list of capabilities able to generate the broadest consensus. Robeyns (2003) proposes a procedure and a set of criteria to be applied for minimizing biases and reach a consensus. Other authors remark that we should focus on a small set of universally recognised dimensions, such as health, education and housing conditions which are also traditionally considered in most sample surveys on quality of life. One may object that most empirical studies in this field make use of data which are not gathered for measuring functionings or capabilities, and no normative justification is provided with reference to their relevance. See Alkire (2002), Gasper (2004), Robeyns (2005) and Giovanola (2007) and Magni (2006) on ethical and philosophical aspects related to the list.

freedoms drawing on universal human rights framework, as well as on deliberative consultation with the general public and individuals and groups at high risk of discrimination and disadvantage. The Commission also suggested that these dimensions of equality should be jointly considered and comparisons made across the whole set of dimensions.

A controversy still remains with reference to poverty issues broadly considered. In fact, it is not clear whether within a given list of capabilities (or independently from its existence) a special attention should be paid to a set of basic capabilities (which can include among the others an adequate nourishment and health standards, access to education, social and political life) which cannot be disregarded, no matter what the degree of inequality is in other dimensions.\(^8\)

Here I want to point out that arguing over the number of dimensions to be taken into account in the analyses (alternatively linking to poverty, inequality or well-being) is a problem shared by every multidimensional approach, including the equal opportunity approach discussed in the previous session. It seems, however, that only the capability approach literature has developed a serious debate on it.

A second contentious point refers to the concrete possibilities to operationalize the capability approach due to a lack of a specific metric for valuing capabilities or functionings, as well as to its rather demanding structure, because of the quantity and quality of statistical information required. In fact, as already mentioned, unlike Roemer Sen does not provide a mathematical formula or an algorithm for measuring capabilities or functionings. This choice is consistent with the original aims of this approach which want to be a broad, flexible “way of thinking” adaptable to different issues in all possible contexts. From this point of view, the main problem does not seem to suggest a single formula, but rather to test different strategies and techniques suitable to put such theoretical framework into operation, preserving its original richness.

Sen neither ignores nor underestimates these difficulties. The capability framework he suggests is intrinsically pluralist not only with reference to the number of dimensions to be measured, but also in terms of heterogeneity of the agents as well as of the multiplicity of contexts under analysis. On one hand, the standard poverty measurement approach (based on an income poverty threshold used as a benchmark to compare and contrast individual life conditions) is totally inadequate. As Sen argues, in order to take human diversity and heterogeneity of

\(^8\) It is important to notice that Nussbaum and Sen do not refer to “basic capabilities” in the same way. Sen defines them as a set of beings e doings which make human life dignified, such as the essential ones just mentioned. Nussbaum describes them as “a set of innate abilities which constitute a basis for developing advanced skills” (Nussbaum, 2000). Unfortunately, the term “capability” is ambiguous in itself and sometimes Sen seems to use it in its literal meaning, i.e. an individual ability to do. See Sen (1993).
contexts seriously, even if we want to preserve a money metric (something which represents nevertheless a second-best option) we should not refer to a minimum income threshold applicable to all. Rather, we should be able to identify adequate thresholds which allows people to achieve a minimum set of functionings, according to their characteristics and to the specific circumstances they live. On the other hand, if we move from a unique metric to a genuine multidimensional view some additional problems of arbitrariness arise, including the fact that there is no unique broadly acknowledged method of aggregation across dimensions or a pre-defined set of weights to be assigned to each of them. Alternatively, we could simply rank some vectors vis-à-vis others, instead of collapsing multidimensionality into a synthetic index of poverty or well-being. This allows for partial instead of complete orderings, but as Sen remarks it makes more sense to accept less ambitious partial ranks than to insist on arbitrarily complete orders (Sen, 1985).

Sen’s approach is also considered very demanding because of the range of information required. This is true, although not very different from other multidimensional approaches to poverty. However, the growing availability of datasets stored and spread by International Agencies and Statistical Offices as well as some interesting examples of ad hoc analysis conducted in some countries are gradually coping with the lack of data, providing a broad range of good quality data.

Nowadays, Sen’s approach has been used in an increasing number of empirical studies (see Chiappero-Martinetti e Roche, 2009 for a recent review), whose innovative methods and analytical rigour implicitly confirmed its validity, showing that measuring capabilities and functioning remains a challenging but feasible exercise.\(^9\)

Moreover, it is important to remark that most of these problems do not pertain exclusively to the capability approach but affect every multidimensional approach to poverty and well-being analyses.\(^10\)

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\(^9\) See Eurostat and OCSE Internet websites for EU countries. With reference to developing countries, there is now a growing availability of household surveys: e.g. see the World Bank LSMS Project - Living Standard Measurement Study (www.worldbank.org/lsms). The HDCA website provides an extensive review of both empirical analyses and methodological tools used for operationalizing the capability approach. See: www.capabilityapproach.org

\(^10\) See Atkinson (2003), Bourguignon e Chakravarty (2003). In Sen’s words (1992, p. 108-109): “If we concentrate on certain basic general functionings and corresponding capabilities, there may be much more agreement on their importance than there would be if we concentrate on particular commodity bundles and particular ways of achieving those functionings. For example, there is likely to be more intercultural – and also interpersonal –
A third issue concerns paternalism, namely the approach’s tendency to allow public policies to interfere with individual choices. When discussing the link between personal and social responsibility, Sen underlines how the former should not replace the latter, because responsibility presupposes freedom. Social and individual responsibility can and must complement each other. As he writes (1999, p. 284): “The adult who lacks the means of having medical treatment for an ailment from which she suffers is not only prey to preventable morbidity and possibly escapable mortality, but may also be denied the freedom to do various things – for herself and for others – that she may wish to do as a responsible human being.” Promoting society’s interventions towards an increasing individual freedom therefore enhances individual responsibility. According to Sen, there is a strong social obligation to guarantee those circumstances allowing human capabilities to be fully expressed. At the same time, this being an opportunity-based approach, individual choices and responsibilities maintain a pivotal role.11

In this respect, Nussbaum’s version is perhaps weaker because of the predetermined list of capabilities, which in turn presupposes an apriori conception of the good. Nussbaum argues that the list’s contents are far too general and minimal to be paternalistic. Rather, they shall be used to build a basic consensus area among different conceptions of the good. Moreover, referring to capabilities rather than to functionings leaves more room for individual choices and responsibilities.

4. **Equality of opportunity vs. equality of capability**

Equality of opportunity bears a strong similarity to equality of capability.12 Both

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11 “The denial of opportunities of basic education to a child, or of essential health care to the ill, is a failure of social responsibility, but the exact utilization of the educational attainments or of health achievements cannot but be a matter for the personal herself to determine” (Sen, 1999, p. 288).

12 Scholars of the capability approach often use capability and opportunity without distinction. Here I want to draw a clear line of demarcation between the two concepts used by Sen and by Roemer. With reference to the main differences between equality of
the approaches distance themselves from equality of resources and equality of outcomes and take an intermediate position in the abstract process of generating well-being. This latter can be expressed as a sort of production function which transforms inputs (resources, public and private goods) into outputs (outcomes, advantages or achieved functionings). They both make use of a multidimensional view and assign a major role to individual responsibility, although in different ways. Finally, they both take into account human diversity, focusing on vertical inequalities - whether referring to resources, outcomes or opportunity appropriately defined - as well as on horizontal inequalities (i.e. inequality among groups), as a main source of discrimination. However, the theories differ in their articulation of such inequalities, with no marginal consequences on a methodological level, as well as in terms of policy implications.

The diagram in figure 2 provides a tentative comparison between the two approaches, in a simplified version.

Figure 2. Equality of Capabilities versus Equality of Opportunities

<table>
<thead>
<tr>
<th>Equality of capability</th>
<th>Equality of opportunity</th>
<th>Levels of analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public resources, private endowment, commodities and services</td>
<td>Circumstances: individual, household, institutional</td>
<td>INEQUALITY</td>
</tr>
<tr>
<td>Conversion factors: personal characteristics, household characteristics, institutional characteristics</td>
<td>“Types”</td>
<td>EQUALITY</td>
</tr>
<tr>
<td>Capabilities set (opportunities, options)</td>
<td>Opportunities set</td>
<td>RESPONSIBILITY</td>
</tr>
<tr>
<td>Achieved functionings/outcomes</td>
<td>Effort (+ talent + luck)</td>
<td></td>
</tr>
<tr>
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<td>Achievements/outcomes</td>
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capabilities and other equality principles (in particular, equality of resources and equality of well-being) see Granaglia (2007).

13 See Chiappero, Grasso, Pareglio (2008) and Ruggeri-Laderchi (2008) for a discussion about the theorising and operating of the capability approach in terms of production functions or as a generating process of well-being. See Chiappero-Martinetti and Salardi (2009) for an econometric estimation of conversion rates.
The observable objects are shown in grey boxes, while the non-observable elements are in dashed ones. Both Sen and Roemer define equality in terms of non-directly observable objects (namely, capabilities and opportunities) and they both consider two major sources of inequality. First, individual characteristics which generate unequal personal conditions, whether social, economic or demographic. Second, circumstances experienced by the subjects, which can ultimately create actual discrimination among groups, whether institutional, cultural or political. Drawing on these differences, Roemer defines his “types”, while Sen traces back to them the existence of different conversion rates in the transformation process of endowments and resources (both private and public) into functionings.\footnote{See Chiappero-Martinetti e Salardi (2009) on the difference between conversion rates and conversion factors.}

Here, some clear differences emerge between Roemer and Sen theories. First, Sen considers conversion rates as the result of a process transforming means into ends, but maintains a clear distinction between these three different aspects. Sometimes, Roemer implicitly refers to the conversion process in a way which is not dissimilar from Sen, as in the following passage: (Roemer, 1998, p.6) “Guaranteeing equal per capita financing of educational facilities is, however, non-sufficient to provide equal educational achievement, since different children are able to use educational resources (teachers, books, school buildings) with different degrees of effectiveness or efficiency.” However, types and circumstances in the end coincide in both Roemer’s algorithm and in his empirical studies, where circumstances become a proxy for the (non-observable) opportunities set.

Second, Sen neatly distinguishes resources or endowments from outcomes or functionings. Quite the opposite, in Roemer’s empirical studies these two elements (resources and opportunities) tend to overlap. Roemer does not include resources as an independent aspect in determining equality of opportunity. This latter is entirely determined by circumstance, type, effort, objective, policy (see Roemer, 1998, 2009) and there is no explicit reference to the amount nor to the nature (public or private) of available resources. Moreover, when defining the “objective” as “the condition for which the acquisition of opportunities is to be equalized”, Roemer includes in it things such as wage-earning capacity, although he empirically refers to the available income (Roemer 2009, p. 32). Quite clearly, this double overlap greatly simplifies both formalisation and application of Roemer’s approach, allowing him to formulate an algorithm and to operationalize it in a relatively easy manner. However, it suffers from lack of clarity in the arguments and can raise some relevant problems in terms of policy implications as discussed earlier with reference to figure 1.
5. Conclusions

When assessing inequalities, focusing on actual opportunities differs under several respects from assuming outcomes as a focal point, especially when outcomes are conceived only in terms of how income is distributed within a given society. More specifically, approaches focused on opportunities i) acknowledge as morally unfair inequalities due to circumstances independent of individual responsibility, such as gender, race or family backgrounds; ii) attach great importance to individual choice and individual freedom to pursue their own tasks; iii) connect choices and actions to individual responsibility, as long as they are genuinely free (as Sen particularly emphasises).

These three features apply to Roemer’s as well as to Sen’s approaches. However, the latter sounds more convincing to me, for several reasons which I tried to argue in this paper. First, because it makes a clear distinction between opportunities and circumstances, on one side, and between available resources and achieved outcomes, on the other side. In Roemer’s equality of opportunity, these elements tend to overlap, while Sen provides a neater difference between the constitutive elements of his proposal.

These differences are not just a matter of language. As I have tried to point out in this paper, they may have important consequences in terms of policy implications when trying to make up for inequalities.

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Summary

In the last decade, the debate on egalitarian justice has increasingly shifted from inequality of outcome to equality of opportunity. This latter paid greater attention to social and economic circumstances which hinder individuals from competing at the same starting level, and to the real opportunities people have to pursue their own life plans and objectives. Amartya Sen and John Roemer are considered the authors who made a significant contribution to the debate, even though they started from different premises, and reached rather different conclusions. In this paper, I will compare and contrast two approaches – equality of opportunity of John Roemer and equality of capability of Amartya Sen - pointing out analogies and differences between these two views.