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OPPORTUNITY SETS FROM AN OBJECTIVE APPROACH

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Abstract

This paper focus upon individual opportunities as the adequate standard for distributive decisions. An extensive literature on the measurement of individual's *opportunity sets* has appeared in the last years challenging *welfarism* as the appropriate standard to evaluate social arrangements. Nevertheless, *opportunity sets* have been rarely defined in an objective account. Instead, much of the efforts have been oriented to value individual's opportunities in terms of the freedom of choice they face. The idea is correct, but the measures proposed have taken a dangerous 'U-turn' to a subjectivist approach ever since the standards proposed for measuring freedom of choice are entangled with individual's own preferences. If we include valuations depending on individual's preferences we return to a welfarist standard. But exactly the opposite was intended when focusing on the individual's set of opportunities in the first place. We intend to give a definite objective character to the measurement of *opportunity sets* and argue that there is no other alternative if our project is motivated by an egalitarian concern.

Keywords: Well-being; opportunity; inequality; capabilities

“OBJECTIVELY VALUED OPPORTUNITIES”: RANKING OPPORTUNITY SETS FROM AN OBJECTIVE APPROACH

1. Introduction

This paper will discuss at a theoretical level the importance of focusing at opportunity sets (OS) as an adequate metrics for measuring individual levels of well-being which, in its turn, is instrumental for a particular egalitarian project: the project of equalising opportunities.

We will see that the literature focusing upon OS as an alternative to the welfarist approach for distributive judgements have been gaining an important space within the literature of social choice theory. Nevertheless, our aim would be to re-assess the focus upon freedom of choice that some of this literature is concerned with and to dismiss the preference-based methodology that accompanies it. The idea is to try to legitimate our theoretical approach as the adequate fundament for the measurement of individuals levels of well-being, and hence as an adequate standard to be based upon for our redistributive policies.

We will advocate an objective account to well-being. Therefore we will be critical to that OS literature that still link individual freedom of choice with a measure of their preferences. We believe that this is an error since the whole egalitarian project based upon opportunities is precisely constructed as an alternative to welfarism (in its preference satisfaction or revealed preferences account) which is thought as an inadequate source of information for our justice concerns.

We will not be intrinsically interested in measures of freedom of choice but in what this idea means in term of accessing valuable and objectively normative opportunities that could enhance individuals' quality of life. We should be able then to construct objective

OS that could be interpersonally comparable. Thus, this would also imply a departure from many efforts within the OS literature which focus in the problem of constructing ranking of OS but from the perspective of the (same) individual. We are not concerned in using this framework to conclude about which sets give more or less opportunities (freedom of choice), or higher or lower well-being to the individual. Our main concern is to compare OS among individuals as to conclude something about their quality of life and their differences.

The second section will briefly give an account of the need to move away from a pure subjective approach to well-being and the efforts towards this aim appeared in the recent literature. This section will briefly present the link of these steps with the much broader project in the fields of moral and political philosophy¹. It is also important to make clear from the beginning that our move towards a perfectionist view is rooted upon philosophical grounds, but it is not less important to say that when we think in policy making and defend a normative position (such as, say, focusing upon the improvement of safe water conditions for poverty alleviation) we are defending no more than an objective position (where we value access to safe water as a vital element for human quality of life). Therefore, since we can see in a 'daily basis' that most commonly we apply objective notions of well-being, it is always good to revise our normative claims under this more ontological foundations.

The third section will introduce us directly into the discussion of OS within social choice literature. We will see the obvious link of OS with freedom of choice and the axiomatic discussion of metrics to rank them as an evaluative effort towards distributive aims.

The fourth and fifth sections will give us our own interpretation of OS based upon our interest in defining a methodology towards ranking social states in terms of individuals' well-being levels.

¹ For a matter of space I will not elaborate thoroughly this project which gives an argument from these fields to work in the space of opportunities as a proper informational base for our egalitarian concerns triggered by a particular theory of justice.

Finally the last section is left to conclusions and to remind that for policy purposes these methodology should be refined and be connected to philosophical discussions at the ontological and epistemological level regarding the nature of justice and its effects over distributive concerns. We will also remind that this methodology could be transformed to a important underpinning at a theoretical levels to empirical works aimed to attack problems of poverty and inequality.

2. The ‘contentious’ move towards an objective approach

Our project stems from the conviction of the existence of the good life, and that we can know about the particularities that make persons to have a good life and, hence, know how to measure it for the case of promoting the good for every human being. Thus it could be said that this idea of the good has Aristotelian roots and corresponds, then, to the idea of human flourishing. We believe in the existence of universal values that are central to human life, i.e., persons are understood as such if they share these values, if they have the chance to access to certain doings and beings which are considered vital to obtain our human condition (human dignity, if you like). Our moral concern gives rise to a justice construct which demands that all persons should be capable to reach *at least* a minimum level of specific beings and doings. Our justice demands lead us naturally to look at equality in the space of opportunities. Ours is a liberal egalitarian position. It is liberal insofar that it centres in the flourishing of human beings - treating them as “a bearer of value, and an end”² - and leaving to them to decide whatever life they have reason to value. And it is egalitarian insofar –as a demand of justice – it seeks to endow every agent with a minimum set of capabilities necessary for a decent standard of living (worthy of their human condition).

² See Nussbaum (2000, p. 73). In here book, Nussbaum gives an universal account of human being – and of her dignity - that I very much subscribe.

We believe that the capability approach is a valuable step towards the understanding of what is objectively relevant for human well-being. We ascribe to the concept of *capabilities and functionings* – as Sen has presented them in numerous papers³ - as an adequate system of thought in this regard. Nevertheless, and thinking in the operationalization of this approach, we will like to be more conclusive than Sen in describing the composition of those valuable capabilities. As a long-term project we are eager to compromise with a definite list of valuable capabilities to measure the good of society⁴. The former project exceeds by far the intentions of this paper. Nevertheless, posing this ambition gives us the occasion to comment that what is moving us is to understand what are those elements that affect the chances for a person's better life, and to discover what can we do – in terms of redistributive policies – to remove those obstacles that obstruct that aim.

a. Subjective vs. Objective

The only purpose of this paper is to present and discuss a standard of interpersonal comparison that could specify the conditions under which some individuals are worse off than others so as to orient our distributive policies accordingly. Before doing so, and as a necessary previous step before discussing the new metrics, we will like to give a brief defence towards moving away from welfarist egalitarianism towards an objective approach to well-being.

Welfarism⁵ has been increasingly questioned as the adequate metrics to evaluate social arrangements. Welfarism gives a limited informational base in terms of – what we

³ See, for example, Sen (1980, 1985, 1992, 1999).

⁴ In this respect we feel nearer to Nussbaum's approach to capabilities, where she tries to give a list of valuable basic capabilities for the good of human life.

⁵ Sen (1991) defines that “*Welfarism* is the demand that the evaluation of any social state be based exclusively on the utilities generated in that state. Utilitarianism can be factorized into *welfarism* (as defined above), *sum-ranking* (aggregating individual utilities by simply summing them), and *consequentialism* (judging the rightness of actions, policies, and other choices exclusively on the basis of the consequent states of affairs)” (p.16; *his italics*).

believe are - relevant inputs for evaluating social states⁶. In the last years, the development of social choice theory has acknowledged this deficiency, thanks to some extent to Sen's continuous tackling of this problem and his presentation of an alternative framework of thought. Welfarism – or, more generally, utilitarianism - is only capable of including our concerns for other components of individuals' well-being via an indirect way: insofar as their effects can be transformed into utilities. But the utilitarian metrics used by this school of thought (welfarist egalitarianism) is under sever scrutiny, and the main reason of this scrutiny is due of its subjective account of well-being. The problems of “expensive tastes”, “cheap tastes”, “offensive tastes” or “external preferences” are paradigmatic of the latter.^{7 8}

We see that a major problem of egalitarian welfarism is its subjective account of well-being, basically, its foundations upon individual preferences. Basing our judgement regarding the goodness of certain social states upon interpersonal comparisons of well-being (which in it turn are based upon a notion of individuals' preference-satisfaction) is a doubtful project in itself. If we understand preference “as the mental state associated with an actual or potential act of choice” (Sugden, 1998) then equalising individuals' well-being does not seem a just mechanism. The subjectivity inherent to the preference-based account of well-being makes it a difficult informational base to cope with our demand of justice.

But what kind of well-being are we talking about; which is the notion of well-being we are concerned with? To answer this question correctly (though briefly in this paper) we will first have to make clear that ours is a political project that promotes a kind of

⁶ Sen (1999, ch. 3) writes that “the real “bite” of a theory of justice can, to great extent, be understood from its informational base: what information is - or is not – taken to be directly relevant”. In this spirit, he dismisses utilitarianism as well as libertarianism as theories of justice.

⁷ These examples, acknowledging the weaknesses of welfarism have been cited extensively. See, for example, Dworkin (1981a, 1981b); Cohen (1989); Sen (1992, 1999 and cited literature); Arneson (1989), though still favours “equality of opportunity for welfare”; and Hausman & McPherson (1996).

⁸ Rakowski (1991) summarises what he thinks are three important weaknesses of egalitarian welfarism, namely, the problem of external preferences; the problem of not being capable of distinguishing between preferences or needs people are responsible for - which leads to the problem of expensive tastes or the ‘Tiny Tim happy cripple’ situation; and the problem of not being able to stand alone as a theory of distributive justice since it says nothing about the fairness of methods used in the effort of equalising welfare, needing a more basic ‘theory of fair shares’.

equality of opportunities among persons. This political project has a moral basis and hence it is triggered by a justice mandate to promote those things that will make someone's life go better. Thus we are not interested in constructing a theory of well-being nor discuss extensively about the validity of our moral claims. We will only present our line of thought.

We are certain that there is not a single notion of individual well-being. Of course, the preference-based notion is only one of them. What we claim is that this notion based upon individual mental states and desires is not adequate for a political project which will like to give equal access to opportunities for its society members. Following this line, we can say that we agree with Scanlon (1998) when he differentiates those notions of well-being from a 'first-person point of view' – which could be defined independently of any moral ideas of – with those from a 'third person point of view' which requires moral considerations. Scanlon (1998) argues that

“[f]rom a third-person point of view, such as that of a benefactor, a notion of well-being has greater significance [than a first-person perspective]. In moral thinking, also, we may need to appeal to various conceptions of well-being and to make comparisons of how well-off people would be under various conditions, as measured by these conceptions. But what are employed in moral argument are generally not notions of well-being that individuals would use to evaluate their own lives but, rather, various moral conceptions of how well-off a person is – that is to say, conceptions that are shaped by one or another idea of what we owe to and can claim from one another. This is most obvious in political philosophy in the various standards that have been proposed as measures of distributive shares for purposes of assessing claims of justice, such as John Rawls's primary social goods (income and wealth, powers and liberties, and the social bases of self-respect) and Amartya Sen's capability sets (which include the “functionings” such as good health, ability to take part in social life, and so on of which an individual is

capable). From an individual's own perspective, these criteria offer very incomplete measures of how well his or her life is going. One life might be much better than another from an individual's point of view – happier, more successful and so on – even though the two lives were the same as measured by Rawls's or Sen's criteria. This divergence is due to the fact that these criteria are supposed to measure only those aspects of a life that, according to the theories in question, it is the responsibility of basic social institutions to provide for” (p. 95).

The above paragraph describes, in general terms, what is the motivation of our project. And in this paper the main idea we want to present is the necessity to move away from subjective standards of well-being towards an appraisal of a person's well-being which should not be dependent upon that person's own tastes and interests. We will call this move a move towards an appraisal of an 'objective standard of well-being'. We do not pretend to present a complete and rigid theory that will explain what are those things that make a life a good life. That is more the task of the philosopher. Our task is a normative one, which is to come with a coherent argument in favour of choosing a particular framework that would serve us to evaluate social policies in terms of their effect over individuals' quality of life⁹.

Scanlon (1993) rejects the term “objective” because of its misleading interpretation since could be compared as the opposite of subjective. Scanlon argues that when we reject subjectivity is it not that we are automatically in favour of proposing a definite theory about what it is that makes a life a good life. Scanlon sees “unlikely that there is any such account to be had [of offering a unified account of what makes things good], since it is unlikely that there are any good-making properties which are common to all good things” (p. 191). He prefers to think in “substantive good theories” as an alternative to a

⁹ Sumner (1996) when discussing if Sen's capability approach to welfare is subjective or objective he poses the following phrase:

“If we begin with the descriptive aim of comparing living standards in different societies, or with the normative aim of assessing economic or social policies for their impact on the quality of life, then in order to get on with the job any reasonable inventory of the basic

subjective account of well-being. A substantive good theory could successfully meet the objective of describing a class of things (goods) that will make life a better one, and defend them by reason. Scanlon project is not as different as ours since it have the features that we are looking for: i) it is objective (or ‘substantive’) in the sense that the standard of well-being transcends individual preferences; ii) it permits the construction of a list of goods that are seen as significant for human life; and iii) it does not think that it is necessary to entangle in the quest for the definite good (having deep doubts if this will be fruitful at all), but to advance in proposing – and being capable to defend - those goods which having more of them will imply an improvement in the person’s quality of life.

b. A list of basic human functions?

Though Sen’s departure from utilitarianism is not a complete rejection of its requirements¹⁰, he nevertheless still insists in demanding a broader informational base, “focusing particularly on people’s capability to choose the lives they have reason to value” (Sen, 1999, p.63). Therefore, a substantive or (so we could say) objective approach tends to be rescued using a non-utilitarian focus. Is in this direction that social choice theory is moving today, where concern for individual freedoms (such as freedom to choose), their liberties, or their heterogeneity are re-modelling the mechanisms and methodology within this field.¹¹

However, Sen’s objective account of well-being is not that all clear (or not as clear as we would like). We can certainly say that his thought corresponds to a departure from a subjective approach (it certainly corresponds to a critique to utilitarianism as the adequate

or standard sources of human well-being will suffice; we need not join the philosopher in trying to assemble an adequate formal theory” (p. 68).

¹⁰ For instance, in his ‘capability approach’ to justice he acknowledges both the importance of ‘consequentialism’ and the idea of assessing individuals’ well-being as part of a valid evaluation of alternative social arrangements. Of course, he neglects the ‘utility-centred mental-metric’ account of well-being as the proper one. To be clear on this: Sen does not ascribe the utilitarian project – nor Rawls’s primary goods approach nor Nozick’s libertarianism – as the proper informational bases (‘spaces’) to make social judgements (more of this in Sen 1999, ch. 3).

¹¹ More of this in Sen’s (1999) “Development as Freedom” and in numerous works of him cited in his book.

space to demand equality¹²) in favour of his ‘capability to function’ approach. The movement to ‘capabilities to achieve functionings’ clearly moves towards measuring what is intrinsically important for the well being of individuals: “the *substantive* freedoms – the capabilities – to choose a life one has reason to value” (Sen, 1999, p.74; *italics are mine*). The focus on capabilities shows the existence –or not - of freedom to achieve certain functionings (such as being nourished, decently clothed, having access to education, being free from diseases, etc.). Up to this level we can follow Sen’s approach as an objective attempt. But Sen also is eager to include those functionings that the individual has reason to value (according to some personal characteristics) as part of the informational base to evaluate social arrangements. We would say that by giving personal valuations a role in explaining the individual’s well-being, then subjectivism finds an open door and enters strongly in our social arrangements. Sen is not clear in this respect. We do not see any problem in including all type of functionings a person has reason to value if our aim is elaborating a comprehensive account of a person’s well-being. But this account does not serve for objective interpersonal comparison as it would be required for the case of evaluating social arrangements, as we understand it¹³. We will leave this flank open¹⁴, only keeping with us the Aristotelian roots of the capability approach. But now covert comes other critique to Sen’s approach: the operability of his approach. Which would be those valuable functionings that make a better life? And how we will rank different – non-nested - sets of functionings? In relation to our interests in this paper we would say that much of this situation is solved by being more concrete in advancing towards an objective account of well-being using, of course, the capability approach, i.e., “by introducing an objective normative account of human functioning and by describing a procedure of objective evaluation by which functionings can be assessed for their contribution to the good human life” (Nussbaum 1988, p. 176). Nussbaum here is thinking in a political solution to advance in securing more opportunities or access to “basic human capabilities”. She is more eager than Sen to advance in the definition of

¹² Sen dismisses utilitarianism as a guide to personal well-being, a basis of social ethics and for the assessment of equality (see Sen 1992).

¹³ A good analysis of the interrelation between functionings and well-being could be found in Sen (1993).

¹⁴ In the next sections we will see that this subjective account comes around again in Sen’s work over opportunity sets, where acknowledging individual’s preferences is of first importance for defining the degree of freedom of choice (opportunities) an individual has.

what those central capabilities are and to include them as foundations of basic political principles (see Nussbaum 2000, ch. I)¹⁵.

Nussbaum gives us an example that the capability approach can be operationalised. We back her in this attempt. But our aim is not to give a list of capabilities (as Nussbaum certainly does - and it is very welcomed) but to establish the framework that could permit that Nussbaum's list or any other proposal constructed under reasoned discussion could be underpinned by a comprehensive methodology (guided by our egalitarian demand).

That framework, we believe, corresponds to the one of the person's opportunity set (OS). Thus we see the move towards OS as a natural one guided by two basic ideas. Firstly, we believe that focusing upon individual OS is relevant in determining their well-being and the social good. In this sense our quest could be interpreted as an Aristotelian one; searching for what makes the good life. As we stated before, this is not as contentious as it seems. For example, if we look at the methodology implicitly used recently at issues such as measuring poverty, inequality or human development, all of them seem to use an objective account of well-being. For instance, in the case of United Nation's Human Development Index, what is thought as good for human development correspond to "achievements in the most basic human capabilities – leading a long life, being knowledgeable and enjoying a decent standard of living" (HDR, 1999). Or, in the case of a Basic Human Needs approach, a concrete list of basic needs using an income metrics) is

¹⁵ Sen prefers to keep his approach at a general level, at the risk of finding some incompleteness in it (as proved in the paragraph above). Sen thus (1993) responds to Nussbaum 'invitation' - to introduce an objective normative account of human functioning – with the following:

"I accept that this would indeed be a systematic way of eliminating the incompleteness of the capability approach. [...] My difficulty with accepting that as the *only* route on which to travel arises partly from the concern that this view of human nature (with a unique list of functionings for a good human life) may be tremendously over-specified, and also from my inclination to argue about the nature and importance of the type of objectivity involved in this approach. But mostly my intransigence arises, in fact, from the consideration that the use of the capability approach as such does not require taking that route, and the deliberate incompleteness of the capability approach permits other routes to be taken which also have some plausibility. It is, in fact, the feasibility as well as the usefulness of a general approach (to be distinguished from a complete evaluative blueprint) that seems to me to provide good grounds for separating the general case for the capability approach (including, *inter alia*, the Aristotelian theory) from the special case for taking on *exclusively* this particular Aristotelian theory" (p.47; *his italics*).

provided to measure if households are below or above a minimum level of well-being (corresponding to a threshold vector of these needs) for not being considered poor.

Secondly, and strongly related with our first motivation, in determining the social good we are based in a particular theory of distributive justice that sees that the adequate space to demand equality would correspond to the space of opportunities. These two motivations go hand in hand for the construction of a meaningful argument and framework to measure alternative social states aimed for redistributive policies.

3. Opportunity Sets Visited

The origin of the new literature focusing upon individual sets of opportunity as an alternative criterion to evaluate states can be traced back to Sen's (1970) "The Impossibility of a Paretian Liberal" seminal paper. This article gave attention to individual's freedom and inalienable rights, which should be taken into consideration once evaluating social states. Sen's article could be seen as that one which gave the foundations that two decades later underpinned (explicitly or implicitly) the development of a fluid debate towards shifting to an opportunity based metrics (see especially Sen, 1988 and 1991 and Pattanaik and Xu, 1990). The traditional preference-based analysis, then, started to share its explanatory space for welfare with a metric that included evaluating freedom of choice as a relevant element for the measurement of individuals' well-being. Freedom started to be analysed not only for its instrumental value (for a better choice) but for its intrinsic importance¹⁶. And within this effort, opportunity of

¹⁶ Sen (1970) demonstrates that there is an inconsistency of choice between the Pareto principle and the principle of 'liberalism' (this principle could be interpreted as the idea that freedom of choice is of intrinsic importance in an individual's well-being). Later, Sen (1988) elaborates more about the relevance of freedom of choice. The intrinsic importance of freedom of choice is given mainly by its characterisation in its 'positive' form ("concentrating in what a person can choose to do or achieve" (p. 272)). Nevertheless, the instrumental importance of freedom (more related to its 'negative' conception) it is also valued. Sen (1988) finishes arguing that the space of capabilities is the adequate one to assess and characterise positive freedom.

choice became a good candidate to evaluate the person's degree of freedom of choice (more of this later).

Whatever the genesis of this first encounter with OS was, we have already presented that nowadays the approximation to OS analysis can be said to have two main motivations (see Peragine, 1999). In the first place, focusing upon OS permits us to capture the idea of individuals' freedom of choice - both using a procedural or consequential (welfarist or non-welfarist) consideration¹⁷. (Sen (1991), for instance, proposes that it is absurd to dissociate freedom from our own preferences over options, not directly discrediting welfarism in its consequentialism form, but moving away from its utilitarian roots; this paper has been extensively cited in related literature¹⁸). Secondly, staying within the domain of opportunity sets can only be a natural decision followed by our concern for justice. In other words, our motivation to look at OS can stem from a particular theory of justice, demanding a proper space for evaluating the theory's moral concern. And by looking, assessing and comparing sets of opportunities among individuals we are just trying to elucidate the demand of a particular theory of justice. Both motivations, as well, have not to be unrelated. Ours, in any case, corresponds to the latter.

It is relevant for us to follow the discussion within the social choice literature regarding the link between *OS* and *freedom of choice* since freedom of choice could be easily understood as opportunity for choice. As would be deduced from the following review, this literature is advocated to measure an individual's freedom by measuring the opportunities she faces.

a. *Basing our criterion of evaluation in Freedom of Choice: its relation with Preferences*

¹⁷ More of this in Suzumura (1999, pp. 19-20).

¹⁸ See, for instance, Klemisch-Ahlert (1993), Bossert et. al. (1994), Gravel (1994, 1998), Puppe (1995, 1998), Fleurbaey (1998), Gravel et. al. (1998), Pattanaik and Xu (1998), and their references.

Each agent faces a non-empty set of opportunities. An OS of a particular individual could be defined in very general terms¹⁹ as the set containing all available allocations faced by this individual from which she is capable to choose from (see Gravel, 1994). The task is to rank these sets among individuals in terms of their degree of freedom of choice (evaluating which OS offers less or more freedom of choice than the other). Pattanaik and Xu (1990) introduced a set of axioms to establish a ranking rule. At this stage it would be pertinent to introduce some formal notation. Let X be a finite set representing the universal set of conceivable options, with typical elements x, y, z , etc. Every non-empty subset of X can be interpreted as a possible opportunity set. These sets will be denoted by A, B, C , etc. Let Z denote the set containing all non-empty subsets of X . Let \succsim denote the ordering imposed by a reflexive and transitive relation defined over X . The asymmetric and symmetric components of \succsim are denoted $>$ and \sim , respectively. \succsim is interpreted as ‘offers at least as much opportunity as’; $>$ as ‘offers strictly more opportunity than’; and \sim as ‘offers just as much opportunity as’. The axioms identified by Pattanaik and Xu are the following:²⁰

A1. Indifference between no-choice situations (INS):

$$x, y \in X, \{x\} \sim \{y\}$$

A2. Strict Monotonicity (SM):

$$\forall A, B \in Z, \text{ if } B \subseteq A \Rightarrow A > B$$

A3. Independence Axiom (IND):

$$\forall A, B \in Z, \forall x \text{ such that } x \notin A, B: A \succsim B \Leftrightarrow A \cup \{x\} \succsim B \cup \{x\}$$

¹⁹ A more specific definition, according to our interests, will be given in the next sections.

²⁰ Pattanaik and Xu (1990) did not use the term “opportunity” for their ordering relation though this term is meant to denote the same idea of the authors, which is the view of freedom as opportunity for choice. Pattanaik and Xu interpret $A \succsim B$ as “the degree of freedom offered by the feasible set A is at least as great as the degree of freedom offered by the feasible set B ” (p.386).

These axioms simply produce a cardinality-based rule, where the more elements an OS has the better in the ranking it will appear. Thus Pattanaik and Xu measure is known as a cardinality criterion. This criterion merely counts options. This rule has been used and criticised extensively in the literature²¹, but nevertheless its principles, and related ones, have often been used in characterising measures of opportunity. All three of the above axioms can be questioned. But the principal limitation of the cardinality approach comes from the Independence axiom. The appeal of this axiom has to do with the intuition that opportunities are additive. This neglects the *diversity* aspect of options: if opportunities are related to diversity, they cannot be additive. As an example we can think in the singletons $A = \{\text{one way ticket from London to Paris}\}$ and $B = \{\text{one way ticket from Paris to London}\}$. We have an individual based in London which will prefer set A than B ($A \succ B$). Now, if we add the option x (“one way ticket by bus from London to Paris”), now it does not look so clear that $A \cup \{x\} \succ B \cup \{x\}$, it seems that the opposite order will prevail: $B \cup \{x\} \succ A \cup \{x\}$. This situation happens when opportunities are diverse and therefore linked with other opportunities.

Hence, as expected, criticism of Pattanaik & Xu’s (1990) simple ranking algorithm came from different perspectives. Primarily, we have Sen (1990, 1991, 1993) arguing that comparisons of freedoms cannot be dissociated from individuals’ preference profiles. From this strong argument stemmed a new branch of discussion regarding the necessity to include preference considerations when ranking freedom (which is equivalent as arguing in favour of the intrinsic importance of assessing freedom of choice).²²

²¹ Even Pattanaik and Xu (1990) did not support this rule, questioning the Independence axiom. They also reconsidered their formulation (Pattanaik and Xu, 1998a, 1998b) and included elements to take account of the diversity among alternatives (in other words, a concern for preferences was introduced).

²² In this literature the concern for the value of freedom is extensively present. For example, dichotomic features as negative and positive freedom have been analysed (see Berlin, 1969; Sen 1988); also the discussion between intrinsic and instrumental value of freedom is quite revealing (see Sen, 1988, 1991, 1992, 1993; Linbeck, 1988; Kornai, 1988). Regarding the place given to freedom, Sen (1992, p. 41) writes:

“This freedom, reflecting a person’s opportunities of well-being, must be valued at least for *instrumental* reasons, e.g., in judging how good a ‘deal’ this person has in the society. But in addition, [...] freedom may be seen as being intrinsically important for a good social structure. A good society, in this view, is also a society of freedom.” (*his italics*).

We also have Klemish-Ahlert (1993) giving a concrete proposal regarding the importance to take into account the diversity of choices the person is presented with. Klemish-Ahlert further developed the axiomatic structure of Pattanaik & Xu. Information on similarity of different options is introduced (hence IND axiom is ruled out). Klemish-Ahlert uses the notion of a convex hull of a set to denote this similarity, where $\text{conv}(A)$ is the convex hull of set A , meaning this that $\text{conv}(A)$ is the smallest convex set containing A . If $x \in \text{conv}(A)$ then we say that x is similar to A . The idea here is to establish that if $x \in \text{conv}(A)$, then in terms of freedom there should not be difference between A and $A \cup \{x\}$ ²³. Following this idea of obtaining more information from every option, Klemish-Ahlert gives a certain positive weight, α , to every $x \in X$, which will serve to replace the INS axiom by the following:

$$\forall x, y \in X, \{x\} \succcurlyeq \{y\} \Leftrightarrow \alpha(x) \succcurlyeq \alpha(y) .$$

$\alpha(x)$ (for all $x \in X$) is understood as a weighted element. If the weight of x and y are equal, then we arrive to the original INS axiom²⁴.

Pattanaik and Xu (1998b, and specifically in 1998a) continued in this direction. They provide an axiomatic characterisation for the notion of similarity of choices presented in the individual's OS. They incorporate preferences in their assessment of freedom of choice but they discredit basing upon the 'present preferences' of an agent, but use a more filtered idea of preferences: those preferences "a *reasonable* person may have over the options under consideration" (1998b, p. 174; *italics are mine*)²⁵. Actually, this is an interesting approach if we want to by-pass the traditional and controversial barrier given

²³ This notion is expressed in Klemish-Ahlert's "convex hull monotonicity property":

$[x \notin \text{conv}(A) \Rightarrow A \cup \{x\} \succ A]$ and

$[x \in \text{conv}(A) \Rightarrow A \cup \{x\} \sim A]$.

²⁴ See Klemish-Ahlert (1993, pp. 192-195) for the complete axiomatic characterisation.

²⁵ Pattanaik and Xu (1998b) continue:

"We believe that consideration of preferences is important in assessing the intrinsic value of freedom of choice, as reflected in an agent's opportunity set. However, it seems to us that, in many ways, the preferences that are crucial in such assessment are not the preferences that the agent actually has, nor the preference orderings that have positive probabilities of emerging as his future preference ordering, but the preference orderings that a reasonable person in the agent's situation can possibly have" (pp. 179-180).

by the problem of preference-based interpersonal comparison of well-being: Instead we can use a metric of ‘pseudo-preferences’ - including a diversity characterisation (i.e., a weighting system) - imposed by a specific construct of social arrangement. In other words, we could “view similarity of options as a matter of social judgement or norms” (Pattanaik and Xu, 1998a).²⁶ This mechanism of reinterpreting preferences more ‘objectively’ certainly goes in our direction. But we believe that still focusing upon preferences, of any kind, is a self-defeating project for ranking objective OS among individuals. We continue.

b. *Looking at OS analysis as part of our egalitarian concerns*

An obvious and simple way of looking at equality of opportunity via OS is to focus upon the intersection of OS. This is obvious when you have comparable OS. The simplest form of comparable sets of opportunity corresponds to the nested cases. But when sets do not follow a ‘Russian dolls’ pattern, as generally they do not, their comparability gets fuzzy. Most properties and axioms developed by authors work well in nested cases, but do not give clear solutions when sets are not contained in each other. The solution for the latter implies a more difficult task. This problem is shown clearly once assuming that equality of opportunity could be interpreted as equality of individual choice sets. Here we see that is highly unlikely to find identical choice sets even for any two individuals, so equalising choice sets turns out to be impracticable. Hence it is preferable to move away from the dogmatic view of choice egalitarianism. Rather, we should provide ourselves with a metric that could rank OS profiles. In this case, the move has not to be complete, i.e., we can still think in common features between set of opportunities, in other words, start measuring those options that can be comparable. Herrero et. al. (1998) look at OS measurement in this perspective, where no information of preferences is needed to obtain certain conclusions regarding OS rankings. In their work they assume there is - or a social planner has - a social ranking “induced by the way society ranks uniform profiles”. By this method, a ranking could be established by looking, in the first place, at common

²⁶ For a more thorough analysis and exposition of the development of this literature see Sugden (1998) and Peragine (1999).

opportunities share by the individuals. Limiting our measure to these common opportunities is still valuable. That is certainly the case when we are not as worried to equalise OS but to equalise access for minimal rights (see Maniquet 1994). We will keep in mind this contribution as well (we could imagine, for instance, the construction of a list of basic capabilities from where a normative tool would be able to distinguish a threshold for a minimal decent standard of living and hence execute policies accordingly).

c. *Well-being and OS (introducing indirect utility)*

How can we reconcile the idea that freedom has an intrinsic value (apart from an instrumental one) with the one that at the end the individual has to choose only one option from the set and this option should be treated as the relevant one²⁷? Puppe (1995) proposes a two-stage evaluation of opportunity sets. Arrow (1995) looks directly at an indirect utility approach²⁸ and others, such as Gravel (1994) and Van Hees & Wissenburg (1999) revises and questions in the first place the usefulness of talking of ‘intrinsic value of freedom’ for this type of social valuations and evaluations. Other authors’ aim is to rank opportunity sets in terms of well-being evaluation (in a utilitarian fashion), as opposed to solely including the freedom of choice concern. Bossert et al. (1994) develop this type of approach as a better solution to indirect utility and freedom of choice measurement for well-being assessment. Actually, they say that both these components (indirect utility and freedom of choice) influence the individual’s well-being and therefore should be included as determinants of her opportunity set. “Therefore [they continue], the ranking of the individual’s well-being in different situations can be visualised as a ranking of the opportunity sets in these situations, given her preferences” (p.328). They propose two possible ways of approaching to the problem of assessing OS in terms of well-being. The first one is simply to consider separate rankings of these sets in terms of freedom of choice and indirect utility, and then propose a metrics to aggregate

²⁷ Looking at the chosen option has more to do with the importance given to actual realisations of the individual.

these two rankings into a well-being one. The other alternative (which corresponds to the one they develop in their paper) is to work directly in the well-being realm, formulating axioms in this direction, where the intuition behind the axioms has to consider our intuition regarding indirect utility and freedom²⁹.

Here the core of the problem relies again in the character and role to be given to the individuals' preferences. Is the idea to move away from a utilitarian, traditional-welfarist, evaluation (as it seems was the initial idea to shift to the opportunities domain)? Or, will we still try to find a metric to make interpersonal comparisons of utilities, and value only chosen alternatives? We believe the former makes more sense since the whole project of focusing upon OS and move away from the welfarist tradition is precisely motivated by the poor informational base given by the latter for evaluating person's quality of life. Therefore, we insist that the natural path to follow – in our case - is to discard focusing upon individual preferences. We do acknowledge that the idea of *reasonable* or *potential* preferences is more likely to be of interest (see, for example, Pattanaik and Xu (1998b) or Sugden (1998)). But still focusing upon individual preferences (even abstracting from the difficulties to define reasonable or potential preferences) seems quite debatable. We can argue that maybe a theory of justice should be more interested in constructing objective social features thus moving away from individual preferences to a more likely standard of *social preferences*³⁰ or, plainly, *opportunities*.

4. Opportunity Sets Revisited

We are based upon a theory of justice that requires equality of opportunities among individuals. In this case, the set of opportunities we should be looking at should include only factors that are beyond the individual responsibility, since that set is the one that

²⁸ There is a literature that treats preferences as 'flexible', which implies they are not fixed or not perfectly known through one's lifetime. The approach to this problem is treated similarly to the microeconomics problem of decision making under ignorance (see Arrow, 1995 and Kreps, 1979).

²⁹ But see Gravel (1994) for a critique to this approach.

ought to be equalised. Different egalitarian projects and authors - advocate a kind of equality of opportunity. However, they differ in how to interpret 'opportunities'. Therefore, different outcomes are in the authors' mind when thinking in this common term. Thus we can find Arneson (1989) and his opportunities for welfare; Cohen (1989) and his access to advantage; Sen and his capability sets; Dworkin (1981a, 1981b) and his resources; and Roemer (1998) believing in an egalitarian project where access to advantage should satisfy among equally responsible individuals. Nevertheless, all of them - and other authors - understand the egalitarian project as a mechanism that should correct for 'external' circumstances which the individual cannot control (and, therefore, whose effect is not her fault), and that simultaneously can give space to individual's own wills and efforts³¹ (which are inherent to her, correspond to an inalienable part of her identity). Thus this mechanism should not correct for outcomes generated from actions which are responsibility of the individual. The core of this type of egalitarian project is accepting the freedom inherent to agents: if this element is removed equality will deny responsibility. Opportunity and responsibility is another way of expressing the idea of having freedom to achieve valuable lives. Thus understanding the aim of 'equality of opportunity' is also understanding and accepting the idea that full equality is not desired, since different efforts of the individuals (already corrected for their circumstances) should be rewarded differently. Hence 'equality of opportunity' suggests that '[...] it is up to the individual to seize the opportunities offered by society' (Fleurbaey, 1995). Is this type of understanding of social arrangements the ones we are compromised with. Thus we would like now to be more precise in interpreting the elements to be included in the person's OS.

When we discuss about opportunity sets we should make sure we know the components of this type of sets. In this respect, the literature has defined OS only in general terms. For instance, Gravel (1994, 1998) defines it as 'the set of all actions available to [an] individual for choice'. Van Hees and Wissenburg (1999) whereas specifying a set of finite elements, they leave unspecified the character of these elements, could them be

³⁰ Please see footnote 37.

³¹ Dworkin would say 'preferences'.

“interpreted as referring to bundles of goods, actions, social states, etc.”. Returning for a while to the conception of freedom used in this type of measurement, we find that Sugden (1998) analyses the differences between *negative* and *opportunity* freedom as important notions to have in mind before constructing sets of opportunity: judgements about negative freedom cannot be developed within the OS framework (metrics). A good example given in Sugden’s paper to describe the former is the one of a climber who has fallen into a mountain crevasse and is unable to move. In her case she still has a broad negative freedom, the same as before falling into that crevasse. But now her opportunity freedom (choices able to execute) has severely limited; perhaps ‘shouting’ and ‘moving parts of the body’ are her only choices, these two will correspond to her opportunity freedom at that time. For the sake of an operational metrics, Sugden argues, opportunity sets should contain only these latter choices³².

Puppe (1996) focuses too on the opportunity aspect of freedom. His aim is to measure and assess freedom of choice, using OS metrics as the relevant space. He confines his analysis to a two-stage decision model. Firstly, a non-empty OS (or *menu*) is chosen, from which, secondly, one alternative is chosen as the final outcome. Finally, Peragine (1999) understands that if we are working within a context of opportunity-based theories of justice then we should define individual OS “as the set of all factors beyond the individual responsibility” (p.52).

Sugden (1998), in his exposure of metrics for OS, tries to move away from welfarism and its preference-satisfaction standard for evaluating social arrangements. The former also

³² In the axiomatic language, it is defined a universe, X , where the sets can be find. X , most times treated as a finite set, corresponds to the universal set of alternatives. Peragine (1999) defines this X finite set as the one containing ‘all conceivable objects of concern for any individual’. Sen (1991) simply defines it as the universal set of alternative social states. Pattanaik and Xu (1998, p.181) give a more accurate idea, though not a definite one, by establishing X as the universal set of alternatives, whereas these alternatives could be interpreted in different ways: such as commodity bundles, bundles of relevant characteristics of the commodities, or as bundles of (Sen’s) functionings. These alternatives, they affirm, also could refer to other aspects of the individual’s life that should not necessarily include economic aspects (giving the example of her religion or expression of a specific political belief). Other authors keep modeling OS choosing universes that leave open the ‘dimension’ where it is set upon. Such is the case of Gravel (1994, 1998), where he writes of X being an ‘arbitrary universe of possible options’; other several authors do not define the components of the opportunity sets, treating them only as comparable choice sets, this is almost always

implies moving away from the *revealed preference* mechanism for measuring individual well-being. Instead, opportunity sets, and its elements, are meant to be more adequate standards, even if we assume a welfarist strategy of aggregating well-being of individuals (as in Bossert et. al., 1994 or Bossert, 1997) or if we change to an alternative strategy of focusing on fairness or justice concerns. In either case opportunity is seen as an adequate standard to evaluate freedom to choose, as *opportunity* freedom. Sugden asks the following question. Why might opportunity be thought to have intrinsic value (and hence, why an OS can be seen as an element containing value, independent from what is chosen from it)? For his answer, Sugden follows the lines of Arrow, Nozick or Stuart Mill, which embody the idea of freedom as autonomy - and its related values and virtues³³ - to establish the intrinsic value of freedom (and hence of opportunity). When moving to the strategy of looking at opportunity as a demand for justice, Sugden argues that in this case individual preference-satisfaction is not the correct ground to claim resources or actions in the name of justice³⁴. Other spaces are more adequate for this effort (such as could be primary goods, resources, capabilities, access to advantage). In our case, we do not cease to repeat it, we are not directly interested in the ‘why freedom of choice has intrinsic value’ question, but nevertheless this question leads to other interrogation which do concern us. Thus we are likely to answer the former question arguing that freedom of choice has intrinsic value - apart from instrumental - because opportunities have intrinsic value. The diversion is simple and even tautological: we connect freedom of choice with access to opportunities. We should be now able to answer why opportunities have intrinsic value. And this is a question that is easily answered by our moral and justice concerns.

the case when focusing upon freedom of choice discussion – and hence discussing it from a preference-satisfaction context (see for example Puppe, 1996, 1998; Gravel et.al., 1998).

³³ This approach, which a priori we do not oppose in its liberal essence, values the idea of having the means to shape our own lives. Sugden cites Arrow and Nozick in this concern: ‘the richer the set of opportunities from which a person has chosen his way of life, the more that way of life is his’ Arrow (1995); or ‘the more a life is self-chosen, the more meaningful it is’. Sugden also uses Mill to present the idea of *opportunity as exercise*, stating that faculties that are developed in acts of choosing have intrinsic value.

³⁴ Sugden explains (1998, p. 314):

“Most modern egalitarians see equality as a requirement of justice, and not as a means of maximising social welfare; but they recognise the incongruity of claiming that justice requires equality of preference-satisfaction. They seek equality in other domains.”

Using Sugden's framework, we can argue that opportunity freedom is the relevant one for our project. The aim will be to assess all elements contained by a set of opportunities. [[Therefore a two-stage evaluation similar as Puppe (1996) constructs it does not suits our focal aim, though it has attractive features if you want to look at individuals' well-being including their responsibility account.]] For this project it is not as relevant to look at the chosen alternative (and assess its contribution to the individual's utility or well-being) as to assess the complete basket of alternatives the individuals is faced with. In other words, if we are looking at OS for egalitarian concerns, then focusing only upon the chosen alternative, the 'best option', does not make much sense. Instead we should look at the whole profile of the set. Hence, even if we would like to measure well-being attainable by an individual, we should do it from the set perspective: by looking after the access to advantage that this OS offers. This rules out relying only upon indirect utility or upon only 'freedom of choice' metrics. For instance, a 'leximax' criterion as the one developed in Bossert et al. (1994)³⁵ does not serve us much as a ranking alternative. Focusing upon the best option does not give, for this project, the whole picture nor it's solely definition has complete sense in this case.

On the other hand, for our project, as already mentioned, we are less worried upon ordinary commodity bundles than looking at capability to function or access to advantage, which stand more to an end than means for individual's success in life. As Sen (1988, p.279) explains '[t]he freedom to choose between alternative functioning bundles reflects a person's 'advantage' – his or her 'capability' to function'. He continues, '[t]he diverse capabilities to function will, of course, have to be weighted to get an aggregate measure of capability, and the problem of relative weighting is inescapably evaluational'³⁶.

This last sentence gives us some confirmation of what we are searching for when focusing in opportunity sets and its measurement: we want to evaluate sets that reflect the individual's chances to have access to a dignified and successful life, a good life.

³⁵ OS are ranked by a lexicographic mechanism: it starts by comparing their best options.

³⁶ We can see here again a little glimpse of Sen's reluctance to further advance for an objective account of a person's well-being.

Focusing upon freedom of choice analysis, in this case, will demand the evaluation of different OS in terms of their freedom to access to different levels of advantage. Alternatives will be valued as their contribution to this end. Therefore, the own individual (through a personal-preferences metrics) should not be the one called to establish its value (at least in a direct, subjective form) but is society the one that manages the ‘social preferences’³⁷ codes. In other words, given our notion of justice we believe that the opportunity set is best represented by those elements that give the individual freedom to lead one type of life or another. Maybe a defined and finite opportunity set composed by capabilities could represent a comparable OS in terms of our concerns for justice, insofar this capability set will focus upon ‘relevant functionings’.³⁸ But those relevant functionings should be defined as equally relevant (of equal weight) for every person. We could define that the capability to achieve those functionings should correspond to the elements of our objective OS. We could call these elements “objectively valued opportunities” (OVO, for short). Hence we should assess – and compare for policy purposes - individual’s OS by assessing the dimensions of the OVO each of these sets possess.

5. Ranking this ‘new’ Opportunity Sets

We can rescue the axiomatics from the OS literature. We can do this by acknowledging that freedom to choose between alternatives can reflect a person’s capability to function³⁹; being OS the set of relevant alternatives faced by the individual and from which the individual can make choices. A ‘relevant alternative’ will be understood as that one that permits the improvement of the individual access to valuable opportunities,. Valuable opportunities are those decided by our justice principles. Thus they correspond to a matter of social evaluation. We will also argue that valuing similarity of options will

³⁷ ‘Social preferences’ is put only as a colloquial phrasing for what we understand is an objective account of valuable functionings. It is not understood as –nor should be confused with – the idea of aggregating individual preferences.

³⁸ For the case of using this kind of analysis for resource allocation motives, see Herrero (1996).

be a matter of social judgement (see Pattanaik & Xu, 1998). Therefore, the weight of each element of the OS will be given by society. OVO correspond then to an objective account of well-being insofar as they are measured by the same standard for every person and that these elements included in the OS are exogenous to the individual's personal decisions.

Thus we will not look at *indirect utility* measurement as an answer to our question. We will not rank OS in terms of their well-being, as proposed in Bossert, Pattanaik and Xu (1994), since for this case we still have to worry about the alternative chosen and eventually, value it in utilitarian terms. We will not work with individual or actual preferences. We will not subscribe to the idea of reasonable preferences (see Pattanaik and Xu, 1998) nor potential preferences (Sugden, 1998). But nevertheless we recognise their contribution in terms of providing the tools to move away from subject measurement of actual preferences to a more objective mechanism, a mechanism more appropriate to be used in egalitarian theories⁴⁰.

Pointing to this shift towards 'relevant functionings' (by assessing OVO) we can cite Puppe's (1996) idea of essential elements represented in his Axiom F of preference for freedom of choice, describing this axiom as below⁴¹:

$$\forall A \neq \emptyset, \exists x \in A: A > A \setminus \{x\}.$$

The intuition behind this axiom is that not all alternatives are valued as part of a person's relevant opportunity set. Opportunity sets are composed only by essential alternatives, as x.

³⁹ On this, see Sen (1988).

⁴⁰ For a critique pointing out the problems of consistency and applicability that the notion of reasonable preferences generates, see Van Hees and Wissenburg (1999).

⁴¹ We are not following his model. In fact, we are not interested in his two-stage model since the second stage (where one alternative is chosen from a menu – being the composition of the menu the first stage), implies the assessment of the chosen alternative. And as we explained, we are not interested in this latter exercise. Puppe's model, as well, have subjective connotations which we do not subscribe with.

Though Puppe is thinking in a freedom of choice realm, this idea of essential elements serves well to us in terms of giving more information of the elements contained in a set. We could discriminate then, between essential or non-essential elements in terms of their contribution to enhance opportunity. In the same line of Puppe we can find the efforts of Klemisch-Ahlert (1993), Gravel et. al. (1998) or Pattanaik and Xu (1998) or others. It has been acknowledged already that a simple cardinality-based ordering is not the correct metrics for ranking OS. We should look to the characteristics that accompany each of the relevant options, and to how these characteristics are intertwined with the other options. Hence weighting these options (Klemisch-Ahlert, 1993) or looking at the similarity between them (Pattanaik and Xu, 1998) are valuable steps towards the right direction.

We will focus, then, in sets grouping those elements (OVO) that are considered relevant from the point of view of society. In a sense, they correspond to social preferences, the ones that are compared and ordered according to how their use or possession affects the agents' opportunities. For example, we can think in element such as capability of being educated at a school, capability to be kept warm in winter, the possibility to travel abroad; etc. These elements can be compared and ranked. For instance, if the set A of individual i has an element a denoting i 's access to learn, then this element, to be comparable, should be measured in terms of the learning objective and how much effort (hours, for example) takes to this individual to achieve this objective. In this example, the above will imply to look at each individuals capability to be educated, and how much access to this education they currently have. This information could be then collected in a comparable measure⁴².

Our effort should be to construct a complete ordering of OS. But not every element (or *OVO*; or *option*, in the freedom of choice language) is likely to be comparable with every other (we should not confuse *objectivity* with *discretionality*). Opportunities are grouped in lists of relevant options. Some of these options are similar, or expressed in comparable

⁴² For instance, if individual i needs 10 hours to learn a particular lesson – due to some circumstance that is no fault of his own - and individual j needs only 5 hours to learn the same lesson and if each of them have access to the same hours of study (or the same quality-time for it), then it can be said that the opportunity faced by j , regarding this element, is better than i 's opportunity.

metrics (such could be the case of options that could be translated into a monetary basis). But other relations seem not comparable, at least at a first sight. For example, suppose we have two individuals facing OS that are socially seen as equals. Then, if one is enlarged by the capability of being safe during the journey to the job, and the other is enlarged by the capability of bettering the individual's diet, it would be very difficult, at a first glance, to make a value judgement of which OS is better now. And any decision of this kind will imply the existence of a full order of relevant alternatives within society, which is difficult to imagine.

Therefore, though theoretically we can establish a *weight* for each and every relevant alternative (thus permitting comparison among them and giving a unique ranking) it is better - as a first exercise - to focus upon the changes of the own elements of the OS and upon those ones we consider similar (hence more natural to be comparable). This is why we support Nussbaum's effort in constructing a list of central human capabilities. This type of effort corresponds to adequate and welcomed first attempts to operationalise the theoretical richness – and complexity - that we find in this literature. For our ranking purposes, it seems it would be easier to focus upon specific subsets of OVO and establish the relations between them. The axioms below are defined taking into account the ideas presented so far.

Let X be the universal set of alternatives. It is assumed X is a finite set, with typical elements x, y, z , etc. The set of all finite and nonempty relevant subsets of X is Z , with typical elements A, B, C , etc. Let \succsim denote the ordering imposed by a complete, reflexive and transitive relation defined over Z . The asymmetric and symmetric components of \succsim are denoted $>$ and \sim , respectively. \succsim is interpreted as 'offers at least as much opportunity as'; $>$ as 'offers strictly more opportunity than'; and \sim as 'offers just as much opportunity as'⁴³. An object of X will be called an option (or an alternative or an opportunity); an object of Z will be called an opportunity set (OS). An element of an OS will be a vector called a relevant option. Each individual i faces a particular set of opportunities with elements a_i, b_i, c_i , etc. Each element (vector) of this opportunity set can be compared with

itself by its *size* such that, say, $2a > a$; $3b > 2b$; etc.. Thus a set that will nest the other will not be necessarily that one that contains the same and more elements than the nested one. A sufficient condition would only require that this set should possess the same elements - and size - of the nested set but for the size of one vector, which should have a larger size than the equivalent option in the nested set.

Elements of subsets Z could be similar, hence comparable and rankeable. Let S be a reflexive and symmetric binary relation defined over X . For all $x, y \in X$, xSy is to be interpreted as “ x is similar to y ” and $\neg xSy$ is to be interpreted as “ x is not similar to y ” or “ x is dissimilar to y ”. For all $A \in Z$, we say that A is homogeneous iff, for all $a, a' \in A$, aSa' . For all $x \in X$ and all $A \in Z$, we write xSA iff $[xSa, \forall a \in A]$.

For all $A \in Z^{44}$, a similarity-based partition of A is defined as a class $\{A_1, \dots, A_m\}$ such that all $A_i, i = 1, \dots, m$, are non-empty sets subsets of A ; $A_1 \cup \dots \cup A_m = A$; all A_i are pairwise disjoint⁴⁵; and $\forall k \in \{1, \dots, m\}$, A_k is homogeneous. The similarity-based partition will be denoted by $\phi(A), \phi'(A), \phi''(A)$, etc. Let $\Phi(A)$ be the set of all similarity-based partitions $\phi(A)$ of A such that, for every similarity-based partition $\phi'(A)$ of A , $\#\phi'(A) \geq \#\phi(A)$. Thus $\Phi(A)$ is the set of all smallest similarity-based partitions of A . For all $A, B \in Z$ such that A is homogeneous, we say that A does not mimic B iff, $\forall \phi(B) = \{B_1, \dots, B_k\} \in \Phi(B)$, there exists $a \in A$ such that $\forall B_i \in \{B_1, \dots, B_k\}, \neg aSB_i$.

Let SV denote the ordering imposed by a complete, reflexive and transitive relation defined over Z . The asymmetric and symmetric components of SV are denoted SP and SI , respectively. $aSVb$ is interpreted as “relevant option a gives at least as much objectively valued opportunities than relevant option b ” ; $aSPb$ as “relevant option a gives strictly higher objectively valued opportunities than relevant option b ”; and $aSIb$ as “relevant option a is socially indifferent from relevant option b ” (or “relevant option a gives equal objectively valued opportunities than relevant option b ”).

⁴³ Opportunities, from now on, should be understood as ‘objectively valued opportunities’ (OVO).

⁴⁴ The following is taken from Pattanaik and Xu (1998).

Axioms:

A1. Indifference between Similar Situations (ISS):

$$\forall x, y \in X \text{ such that } xSIy \Rightarrow \{x\} \sim \{y\}$$

This axiom replaces in a way the quantity-based INS (indifference between no-choice situations) axiom presented by Pattanaik and Xu (1990) and so much discussed in the literature. Though this axiom still refers to singletons to present the idea that two similar sets should offer equal opportunities.

A2. Simple social dominance (SD):

$$\forall x, y \in X \text{ such that } xSPy \Rightarrow \{x\} > \{y\}$$

This axiom is similar to A1 with the difference that compares two relevant options, one of which is socially ranked above than the other. This will imply that singletons can be ranked in the same way via its ordering.

A3. Relevant option social size (ROSS):

$$\forall x, x' \in X \text{ such that } x' = \alpha x, \text{ with } \alpha \geq 1 \Rightarrow x' SPx$$

This axiom states the vector character of an option, where its size can be modified by a multiple of itself.

A4. S-Monotonicity:

⁴⁵ Two sets A and B are called *disjoint* if $A \cap B = \emptyset$. A collection of sets is called *pairwise disjoint* if any two distinct sets in it are disjoint.

$\forall A \in Z$ such that A is homogeneous, and, for all $x \in [X - A]$, $[xSA \Rightarrow A \cup \{x\} \sim A]$ and $[\neg xSA \Rightarrow A \cup \{x\} > A]$

This involves a very simple case of monotonicity, for a case of a set where all his components are similar and with the inclusion of an outside option.

A5. Monotonicity with Respect to Set Inclusion):

$\forall A, B \in Z$, if $B \subseteq A \Rightarrow A \succ B$

This axiom states what Puppe (1996, p. 178) calls ‘a rather uncontroversial condition for a ranking of menus’. Thus if B is a subset of A , then A offers as least as much opportunity than B .

A6. Relevant option social size monotonicity (ROSMO):

$\forall a, a' \in X$ such that $a' \succ a$ and $\forall A, A' \in Z$ with $A = \{a, b, c, \dots\}$, $A' = \{a', b, c, \dots\}$ such that $\text{diff}[A', A] = (a' - a) > 0 \Rightarrow A' > A$

This axiom states a third type of monotonicity with regard to the size of the vector-options. We assume that the options of the enlarged set A' are the same, but the enlargement of A can solely be produced by grounds of the enlargement of one option.

A7. S-Composition (SC):

$\forall A, B, C, D \in Z$, if $[A \cap C = B \cap D = \emptyset]$, C and D are both homogeneous, and C does not mimic A , then $[(A \succ B \text{ and } C \succ D) \Rightarrow A \cup C \succ B \cup D]$ and $[(A > B \text{ and } C \succ D) \Rightarrow A \cup C > B \cup D]$

The idea here is to adjust Sen’s proposition to the case of dealing with elements or sets that are similar (see Sen, 1991 and Pattanaik and Xu, 1998).

Pattanaik and Xu (1998a) defines then a ‘simple similarity-based ordering’ \succsim . This ordering works well with ‘nested –types’ of opportunity sets. Though in this case they do not have to be actually nested but, using the notion of similarity, it would be enough to compare sets establishing ‘common’ elements (which will be the similar ones) as a starting point for a cardinality-biased ranking. Hence, these authors define this type of ordering \succsim iff $\forall A, B \in Z, A \succsim B$ iff $\#\phi(A) \geq \#\phi(B) \forall \phi(A) \in \Phi(A)$ and $\forall \phi(B) \in \Phi(B)$. This means that “[u]nder the simple similarity-based ordering, opportunity sets are ranked according to the cardinalities of their smallest similarity-based partitions” (p.5).

These definitions can give the basis to continue elaborating an axiomatic characterization of an objective ranking of opportunity sets. But this effort exceeds the aim of this paper. We should be working then in completing these alternative metrics if we do believe that this corresponds to the correct approach for an objective metrics for well-being.

6. Concluding Remarks

We believe in the existence of a social reality that establishes the existence of social facts that can go beyond the fetishist construction of desires (or imposition of some ideas) of particular individuals located in particular space-time circumstances. It is then plausible that social reality could deal with values, and moral principles, as something epistemically similar to facts (perhaps something as epistemically objective as, say, a *typewriter* or a *bicycle*). This gives a key for the acceptance of justice.

Some values and principles then, could be as real as other social elements or institutions (such as money, marriage, religious masses, or the bakery at the corner of the street). We believe in them, and therefore we expect their existence. Moral objectivity can exist then, and justice, as its socio-political expression, should be epistemically real. From where does come the nature of justice? It is an outcome of the interplay inherent between

structure and agency, and it has then a historical component that cannot be denied. The feature of time is key to understand the dynamics of justice, and parallel, to give a non-dogmatic nor fetishist approach to this issue nor to the related one of our egalitarian concern. From this approach, then, we do accept the existence of moral norms which should mould the coexistence within society. Justice arrives then from an innumerable process of reasoning, which have converted it in a social reality. There is an idea of the good life that can be considered real. Of course we will always have a partial approach to it, but this does not preclude us to make the effort of assessing social states from this perspective. In this same line, we do possess a notion of a social ranking of alternatives, of those opportunities that are valued in terms of society's egalitarian demands.

Thus this social reality establishes that the nature of justice is understood as an outcome of social relations. And where values and morals will be treated as something real, something that have effects over these social relations. Of course, these values will also be subject to criticism and rational scrutiny. Therefore, they would not have a dogmatic nature nor attend solely to individualistic premises. Valuable opportunities (or, if you like, social preferences), then, stand as an 'exogenous' element from the individual point of view, but an 'endogenous' one from the totality of the interaction of this two emergent components (individual and social structure). But, the interesting feature of using this idea of opportunities, is that in either cases – 'exogenous' or 'endogenous' - they can be treated as plainly objective thus comparable. On the other hand, we are respecting individuality and its inherent freedom and diversity. Thus, it is not imposed specific ends are not imposed but a social plateau that permits to develop humans' capacities at their highest potential, giving freedom for the prosecution of whatever lives individuals have reason to value. Toleration of diversity is unquestioned.

Welfarism, we have seen here, is not helpful for our above project. Fortunately, an alternative view challenging welfarism as the appropriate standard for evaluating social arrangements has appeared during the last years. This corresponds to the treatment of individual *opportunity sets* as the adequate recipient for evaluating social states. Thus, at

least for this case, the shift from the traditional welfarist domain to the opportunity space seems to be urgent.

We differentiate the space of opportunities from the one of personal or actual preferences. The opportunity domain is better linked with the one representing Rawls's primary goods or Sen's capabilities to function. Nevertheless, we still have to advance towards an objective account of well-being. We are not called, as economists, to construct a formal theory; that would be the work of philosophers (or economists likely to have a try in this field). Nevertheless, economists are called to establish a methodology for assessing individuals' well-being. In this paper we were focused in trying to answer one relevant aspect of the former: how to measure and rank individual's opportunities to live a good life.

Perhaps working only with a – normatively constructed - list of capabilities will suffice for our distributive purposes. That is what we propose. For instance, take Nussbaum's (2000) list of 'central human functional capabilities': She included ten of them in her list, including elements such as 'life', 'bodily health', 'bodily integrity', 'senses, 'imagination, and thought', and 'practical reason', among them⁴⁶. We are sympathetic to this approach, but our main concern here – before constructing any list – was to present the metrics that would serve for our purposes of guaranteeing equal access to elements including in such lists for every individual. We presented a 'fancy' name to help us to differentiate our objective motivation from subjective approaches to person's OS. We find that the elements of the OS we should be looking at should correspond to those which could objectively evaluate the freedom of individuals to access to what society considers the 'relevant functionings' (to secure a good life). We presented thus the 'objectively valued opportunities' (OVO).

Finally, and though in this paper we are more involved with social choice theory than to find practical applications to our egalitarian approach, in order to connect this approach with its operationalization possibilities perhaps the best thing is to show that there already

⁴⁶ See Nussbaum (2000, ch. I) for further explanation.

other accounts of well-being with an ‘objective flavour’ that are being used extensively as diagnostic tools to back-up social policy making. For instance, we could think in two types of approaches (among many others) that could benefit from the theoretical underpinning given by an OS metrics. These correspond to the cases of UNDP’s Human Development Index and the measurement of poverty based upon Basic Human Needs baskets (the Unmet Basic Needs (UBN) Method).

The first case is very much based in Sen’s ‘capabilities’ system of thought. Nevertheless HDI has received many critiques regarding the variables, weights and measurement chosen. Being this type of approach backed up by the idea of OS (as the metrics to assess ‘human development’) it would have better tools to fight those critiques. Of course, we are changing here the perspective of this particular index: from dealing with aggregate figures at country-level to being based in upon individual’s OS. But we only want to establish that the idea of ‘human development’ intended by the UNDP could be defended in the OS space⁴⁷.

Similarly, the poverty measurement of UBN⁴⁸ establishes an objective list which measures the level of satisfaction of basic needs enjoyed by a household. A household is then regarded as poor if the thresholds for all or some of the different basic needs are not reached. The main problem with the UBN approach is connected with the aggregation question. Since different indicators of access to satisfactors are used, it is necessary to establish criteria to classify households that comply with some of the thresholds but not with the others. Again, having a framework such as the one given by the OS approach would be of help to elucidate these types of methodological problems. For instance, we can think in a list of basic needs that are dissimilar one from each other (thus not ‘tradable’) and their presence – up to a threshold – is vital for human survival (at a minimum acceptable level). Hence, we will have an OS which will correspond to a vector of these OVO (needs). The vector will have a value equivalent to zero if any of the needs

⁴⁷ Many others indicators of well-being have been constructed as an alternative to the unidimensional GDP measure for well-being. See Hicks and Streeten (1979) and its references; Sen and Nussbaum (1993, various essays); UNDP’s HDR in the 90’s; Sen (1997).

⁴⁸ See Cepal (1997) and Streeten (1981).

is below its respective threshold. This vector could start increasing above zero only once all of the needs are above their thresholds.

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