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CAPABILITY, OPPORTUNITY, OUTCOME - - AND EQUALITY

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Abstract

Two fundamental attributes of the capability approach are (i) a broadening of the evaluation space from the instrumental means such as income to the intrinsic ends of beings and doings, or functionings; and (ii) the further broadening of evaluation from achievement of ends to opportunity to achieve those ends—from functionings to capabilities. This paper accepts the first broadening but presents a critique of the opportunity perspective in capability theory, using as a platform a critique of recent work on inequality of opportunity. The paper argues that similar critiques of concept and empirical application apply to capability analysis as an analysis and an evaluation of opportunity. Perhaps for this reason, much of the practical implementation of capability theory ends up by in fact focusing only on outcomes in functionings space, with only a loose link to opportunity.

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1. Introduction

The normative discourse in development has been dominated by the primacy of income in the evaluation space, and in turn also by the critiques of this primacy of income. The basic needs approaches of the 1960s and 1970s were self-consciously set against the perceived emphasis given to national income per capita and its growth. The move to incorporating the distribution of this income, with supplementary indices of income poverty, did not completely satisfy the critics because they wanted not just a focus on distribution of income, but also on dimensions of wellbeing beyond income, such as health and education.

Thus the Human Development Index came into play in the 1990s as a weighted average of national achievements in income, education and health. But this could only be a partial answer to some critics of income per capita, since in their view this was to mix up apples and oranges. Income was only relevant instrumentally, while education and health came closer to dimensions which were intrinsically valuable. This critique was different from the critique of income per capita based on neglect of distribution around the average. It was a more fundamental exploration of the space over which evaluation was conducted.

Of course education and health as conventionally measured could also themselves be instrumental in achieving intrinsic dimensions of wellbeing. Where did this chain end? What, indeed, are the fundamental intrinsic constituents of wellbeing? A famous answer was provided, of course, by Sen (1985). These constituents are what are labeled as *functionings* (Robeyns, 2011):

"Functionings are 'beings and doings', that is, various states of human beings and activities that a person can undertake. Examples of the former (the 'beings') are being well-nourished, being undernourished, being housed in a pleasantly warm but not excessively hot house, being educated, being illiterate, being part of a supportive social network, being part of a criminal network, and being depressed. Examples of the second group of functionings (the 'doings') are travelling, caring for a child, voting in an election, taking part in a debate, taking drugs, killing animals, eating animals, consuming lots of fuel in order to heat one's house, and donating money to charity." (pp. 3-4).

The examples given are of course specific and need to be grouped into broader conceptual categories. But they are also specific outcomes, which leads to the next crucial step in the departure from conventional income based evaluations, the move from functionings to *capabilities* (Robeyns, 2011):

"Capabilities are a person's real freedoms or opportunities to achieve functionings. Thus, while travelling is a functioning, the real opportunity to travel is the corresponding capability. The distinction between functionings and capabilities is between the realized and the effectively possible, in other words, between achievements, on the one hand, and freedoms or valuable opportunities from which one can choose, on the other."
Again, specific capabilities can be grouped into broader conceptual categories. Nussbaum (2011) argues for 10 fundamental types of capability. But the key distinction in the move from functionings to capabilities is the jump from outcome to opportunity.

Here the development of the capability approach intersects with a broader discourse, in philosophy and on policy, on opportunity and the arguments for and against outcomes as the basis for social evaluation. The capability approach can also be seen as part of a series of developments which flow from a critique of Utilitarianism, particularly its consequentialist roots. Those who accept the capability approach also tend to position themselves, implicitly or explicitly, on the critique of Utilitarianism and on the debate between opportunity versus outcome as the basis for evaluation.

This paper reconsiders the capability approach from the perspective of a critique of opportunity rather than outcome as the basis of normative evaluation and, more broadly, from a consequentialist standpoint. If we were to accept these alternative perspectives, what survives of the capabilities approach? Quite a lot, it turns out, especially in its empirical and policy applications. This then raises the question of what is truly fundamental about the capability approach—that it expands the focus from income to a broader range of outcomes, or that it expands the focus from outcome to opportunity?

The plan of the paper is as follows. Section 2 revisits the distinction between functionings and capabilities, and relates this to the distinction between outcome and opportunity in the philosophical and policy literature. Section 3 presents a specific critique of the recent literature on equality of opportunity. Section 4 extends the critique to the capability approach, arguing that functionings are a more appropriate focus, and in any case as a practical matter that is what we tend to measure, even if the claim is that we are measuring capability. Section 5 concludes.

2. Capability and Opportunity as Critiques of Outcome

What exactly is the capability approach? According to Robeyns (2015) this is "unfortunately a matter on which clarity is lacking." Robeyns (2015) offers a critique of the Nussbaum (2011) characterization of the approach and no doubt the debate will continue. The literature is now so large and sprawling that the general label hides a multitude of sins (and virtues). But a key element in Nussbaum's depiction of the approach is the distinction between outcome and opportunity or, in her terms, achievement and freedom. Thus in this view it really is capabilities which matter—a functioning as outcome is simply chosen from set of functionings, which is of course the corresponding capability.

Sen (1985, 1999, and 2002) also uses the term freedom, often interchangeably with capability. But this then takes us into an even bigger philosophical literature on the conceptualization of freedom, going at least as far back as Isiah Berlin's (1958) distinction between positive freedom and negative freedom. As Berlin (1958) famously phrased it:

"The first of these political senses of freedom or liberty (I shall use both words to mean the same), which (following much precedent) I shall call the 'negative' sense, is involved in the answer to the question 'What is the area within which the subject - a person or group of persons - is or should be left to do or be what he is able to do or be, without interference by other persons?' The second, which I shall call the 'positive' sense, is involved in the answer to the question.

'What, or who, is the source of control or interference that can determine someone to do, or be, this rather than that?'" (p.2)

Leaving to one side the role and depiction of freedoms in the negative or positive sense it should be clear from his writings that when Sen (1999) uses capability and freedom as substitutes, what he means is not just formal or legal freedom to achieve certain functionings, but actual ability to achieve these outcomes through effective availability. Indeed Kaufmann (2006) calls this the "opportunity concept of freedom."

The opportunity concept of freedom has antecedents in Berlin's (1958) discourse on defining positive liberty or freedom:

"The 'positive' sense of the word 'liberty' derives from the wish on the part of the individual to be his own master. I wish my life and decisions to depend on myself, not on external forces of whatever kind. I wish to be the instrument of my own, not of other men's, acts of will. I wish to be a subject, not an object; to be moved by reasons, by conscious purposes, which are my own, not by causes which affect me, as it were, from outside. I wish to be somebody, not nobody; a doer - deciding, not being decided for, self-directed and not acted upon by external nature or by other men as if I were a thing, or an animal, or a slave incapable of playing a human role, that is, of conceiving goals and policies of my own and realising them. This is at least part of what I mean when I say that I am rational, and that it is my reason that distinguishes me as a human being from the rest of the world. I wish, above all, to be conscious of myself as a thinking, willing, active being, bearing responsibility for my choices and able to explain them by reference to my own ideas and purposes. I feel free to the degree that I believe this to be true, and enslaved to the degree that I am made to realise that it is not." (p.8).

This positive value to the ability to choose also has a strong tradition in the philosophical literature setting out normative criteria for evaluation. But the consequences of choice are then the responsibility of the individual. We evaluate the set from which the choice was made, not the outcome of the choice itself. A usual example given is that of two routes to a state of undernutrition. In one, an individual does not have the resources to achieve a well-nourished state. In another, the individual has these resources but chooses to fast and thus take in minimal nutrition. A very different measured outcome, or functioning, but if the capability, as measured by the resource set, were the same then the capability approach should by its logic evaluate these two cases as being identical.

The move from Isiah Berlin's description of positive freedom, to a normative standard for evaluation based on opportunity rather than outcome, links to the discourse on personal responsibility and the impact that this has had on the discussion of equality, especially by egalitarians. Here is how a recent survey by Roemer and Trannoy (2014) summarizes this train of thought and analysis:

"In the welfarist tradition of social-choice theory, egalitarianism means equality of welfare or utility. Conservative critics of egalitarianism rightly protest that it is highly questionable that this kind of equality is ethically desirable, as it fails to hold persons responsible for their choices, or for their preferences, or for the way they process outcomes into some

interpersonally comparable currency that one can speak of equalizing. In political philosophy, beginning with Rawls (1958, 1971), this critique was taken seriously, and a new approach to egalitarianism transpired, which inserted personal responsibility as an important qualifier of the degree of equality that is ethically desirable. Thus, the development of egalitarian theory, since Rawls, may be characterized as an effort to replace equality of outcomes with equality of opportunities, where opportunities are interpreted in various ways. Metaphors associated with this view are "leveling the playing-field," and "starting gate equality. The main philosophical contributions to the discussion were, following Rawls, from Sen (1980), Dworkin (1981 a, b), Arneson (1989), and Cohen (1989). The debate is said to be about "equality of what," and the philosophical view is sometimes called "luck egalitarianism," a term coined by Anderson (1999)." (p.218)

Among economists the work of Roemer (1993, 1998) is prominent in formalizing measures of inequality of opportunity, his work having sparked a major empirical literature on quantification and measurement, especially in developing countries.

Roemer and Trannoy (2014) place Sen (1980) squarely in the philosophical tradition which concerned itself with personal responsibility and egalitarianism, and Sen (1980) is also often quoted in overviews of the origins of capability theory. Sen was at that time engaged in a major critique of Utiltarianism along with Bernard Williams (Sen and Williams, 1982), taking it to task for each of what they characterized as it constituent components—consequentialism, welfarism, and sum ranking. The criticism of consequentialism and welfarism runs right the way through founding statements of the capability approach.

Putting all of this together, we come to the following defining characteristics of capability theory:

(i) A broadening of the space of evaluations from income to "beings and doings", the key being the means–ends distinction, with income as a means rather than as an end.

(ii) A focus on opportunity rather than outcomes, with the capabilities for functionings as the object of evaluation.

In her characterization of the capability approach, Robeyns (2015) agrees that functionings and capabilities are at the core, but rejects the strict construction of Nussbaum (2011):

"The second essential element that Nussbaum attributes to the capability approach is its focus on choice or freedom, rather than achievements. It is certainly true that there are strong arguments offered by capability scholars as to why 10 capabilities are important *as opportunities or freedoms* rather than functionings (the achievements). Nevertheless, it does not follow that the only conceivable and defensible capabilitarian theories are those that only include capabilities as opposed to functionings (hence opportunities rather than achievements) in their account of value." (p. 10)

In concept, however, what ties capability theory to equality of opportunity theory is the common focus on opportunity rather than outcome, with the attendant highlighting of the role of personal responsibility in evaluative discourse.

I will return to the opportunity versus outcome question for capability based analysis in Section 4, when I reconsider whether it makes a difference given the way in which capabilities are actually measured in practice. However, I move towards this question by first examining recent developments in and critiques of the equality of opportunity literature.

3. A Critique of (In)Equality of Opportunity

Following Roemer (1998), a theoretical literature has developed the concepts (see, for example, Fleurbaey and Maniquet, 2012), and a large and fast growing literature has developed on empirical quantification and estimation, of inequality of opportunity. The use of easily implementable conventional methods of inequality decomposition has led to an explosion of empirical work, especially most recently on developing countries, led by researchers at the World Bank. Recent surveys of theory and empirics included Roemer and Trannoy (2014) and Ferreira and Peragine (2015). In this section I approach a critique of the recent literature from the quantitative side, since it also reveals some fundamental conceptual difficulties in separating outcome from opportunity.

The basic approach starts by an identifying an outcome variable of interest. This is often income, but need not be; it could, for example be years of education, test scores, or access to health services. The central role for personal responsibility is highlighted by the distinction Roemer (1998) draws between an individual's "circumstance" and an individual's "effort" in determining the outcome. The normative force of these labels is self-evident. Circumstance is that which is outside of the individual's control. Among circumstance variables would be race, ethnicity, gender and parental characteristics. Effort is that which the individual controls and can be held responsible for. Only that part of inequality in outcome which can be attributed to difference in circumstance is ethically objectionable—it is inequality of opportunity. That part, presumably the rest, which can be attributed to effort is not ethically objectionable and not a legitimate target of egalitarian policies.

With this conceptual framework, an inequality decomposition analysis can be applied to calculate the proportion of inequality of outcome which can be attributed to circumstances. In a non-parametric calculation, the population is divided into mutually exclusive and exhaustive groups by circumstance categories. Variation of average income across these groups is attributed to circumstance. The "between group component" in an inequality decomposition is thus inequality of opportunity. The residual, the "within group component", is not. Variations of income within a circumstance grouping, around the mean income of that grouping, are held to be the result of individual effort and thus legitimate. An analogous method can be applied in a parametric regression setting, where the outcome variable is first regressed on circumstance variables and the fraction of variation explained by the regression is used as the basis of quantifying inequality of opportunity. Here it can be seen that we can also take account of the fact that some effort variables may themselves be influenced by circumstance variables. Detailed discussion of these methods is available in surveys by Roemer and Trannoy (2014) and Ferreira and Peragine (2015). A leading application is to Latin America by Paes de Barros et. al. (2009), which has been influential in structuring much of the subsequent empirical work within the World Bank and elsewhere.

Kanbur and Wagstaff (2014) and Wagstaff and Kanbur (2015) have launched a critique of this empirical strand of the literature which leads into a more fundamental critique of opportunity based approaches to evaluation. Start with the most basic requirement for empirical work—data. We are prisoners of data sources which collect information on potential circumstance variables at the individual or household level. In Paes de Barros et. al. (2009), for example, the circumstance variables are: gender, race/ethnicity, birthplace, mother's education, father's education and father's occupation. These all look sensible as factors outside the control of the individual in question. But surely there are others—what about parental wealth, or quality of schooling received when a child, or various workplace characteristics of the adult, for example? The point is that such data were not available to Paes de Barros et. al. (2009).

Even if more detailed data is available for a country, it cannot be used for cross-country comparative work because the contribution to inequality of circumstance, and thus the measure of inequality of opportunity, depends on the number of circumstances used. The more the circumstances the greater will be inequality of opportunity for this technical reason alone. For comparative work, therefore, there has to be commonality in the number of circumstances. Thus the measure of inequality of opportunity will be dictated by the lowest common denominator of data availability.

The fact that many circumstance variables are missing will lead to an underestimate of inequality of opportunity (IOp), as highlighted by Hufe et. al. (2015):

"Many important circumstances that play a causal role in income determination have been ignored in the empirical literature. The effects of these circumstances appear statistically as effort, because effort is often measured as the residual cause of income variation after explicit circumstances have been accounted for. Hence, the measurement of IOp is biased downward, perhaps seriously so (see the simulations in Bourguignon et al., 2007 and the discussions in Ferreira and Gignoux, 2011 and Niehues and Peichl, 2014)." (p. 3)

As a matter of practice the variation in outcome explained by variation in circumstance variables turns out to be rather low—around 25% to 50%. One can imagine a policy maker responding to the figure of 25% by saying that this looks quite low and questioning the need for intervention in the presence of other priorities. Some proponents of this method of quantification have fallen back on saying that it should be emphasized that the measured inequality of opportunity is a lower bound. As Kanbur and Wagstaff (2015) highlight, this defense does not wash because the lower bound is insufficiently tight.

The relatively low values of the first generation of estimates of inequality of opportunity triggered a series of empirical responses to raise the estimated value, including a search for data sets with more circumstance variables (Hufe et. al. , 2015), or approaching the problem from the other direction, using effort variables to get at an upper bound figure. Neither of these addresses the issue of luck, which is also in the residual, and which raises conceptual questions on how luck should be treated in the attempt to make a distinction between outcome and opportunity. But many other items presumably in the residual, like genetically inherited qualities and "talent", also raise basic conceptual questions on the attempted separation of outcome from opportunity.

A key conceptual question is how we separate opportunity from outcome, circumstance from effort, when one person's effort becomes another person's circumstance. The most direct example is where parents' effort becomes a child's circumstance, and differences in parental effort lead to differences in child's circumstance and thence to the outcomes for the child as an adult. The effort doctrine for the parents would tell us not to interfere with any of the outcomes of that effort, while the circumstance doctrine would tell us to move to correct those outcomes of parental effort. Even if we were to rescue this conundrum by saying that certain types of outcomes of effort are legitimate objects of policy, this then leads to the difficult empirical question of identifying, for each generation of adults, that part of their effort based residual which will affect circumstances of future generation and thus should perhaps be included in the estimate "illegitimate" inequality.

A similar critique applies, although perhaps less directly, to group or market determined circumstances. Peer effects have now been well documented in the education literature, for example. But these peer effects could themselves be the result of the circumstances of the peers, where for example, self-selection into communities leads to clustering of wealthy parents together. Or, perhaps, they are the result of the efforts of the peers, where for example a group of hard working students influence each other to work harder. More market oriented examples are also available. A group of high income individuals can bid up housing prices in a neighborhood through their independent choices and preferences, but this rise in prices leads to the displacement of low income renters from the neighborhood as it is "gentrified." As a final example, consider an individual who has an unhealthy diet because of limited healthy diet outlets in a poor neighborhood, the choice of outlet location being made by other individuals, who run firms, as part of the exercise of their responsibility given their choices.

All of these examples, certainly emphasize the empirical difficulties of separating out opportunity from outcome through the circumstance and effort distinction. But they also highlight the conceptual difficulties in pressing the personal responsibility doctrine, which seems to have held egalitarians in thrall for several generations. Fine distinctions between personal responsibility and non-personal responsibility are difficult to make in concept and in practice. Attempts to quantify inequality of opportunity as an aid to egalitarian policy making have led, at the first pass, to very low levels of "illegitimate" inequality. But this has only led egalitarian analysts to redouble their measurement efforts without questioning the basic conceptual foundations of the opportunity doctrine, nor whether in practice, if the empirical attempts to identify what is truly legitimate in the residual do succeed, we go all that far wrong in just focusing on outcome inequality in key dimensions.

Given the close connections between the capability and opportunity doctrines, this critique of opportunity in concept and in practice provides a platform for assessing the way in which the capability approach is being and can be used to analyze policy. The next section takes up this story.

4. Transferring the Critique to Capability

The previous section argued that attempts to quantify and estimate inequality of opportunity showed not only the practical problems of the exercise, but that these practicalities also revealed core conceptual difficulties in the opportunity doctrine. In Section 2, I argued that the core of the capability doctrine was first a broader space of evaluation going beyond income, focusing on the intrinsic ends of "beings and doings", and second the further step to emphasize not just achievements in these broader intrinsic dimensions but the opportunity for these achievements. How does this now look in light of the critique of the inequality of opportunity literature advanced in the previous section?

In a very useful exercise, Chiappero-Martinetti (2009) presents a comparison of Sen (1987) and Roemer (1998, 2009):

"Both Sen and Roemer define equality in terms of nondirectly 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. Here, some clear differences emerge between Roemer and Sen's 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…..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.

Although these differences are important to highlight, I argue here that it is a particular similarity between the two which is important.

Notice first of all that although much of the recent literature empirical literature on inequality of opportunity has a focus on income inequality, this focus on income is not of the essence for the opportunity doctrine. The conceptual arguments would apply to any outcome, and indeed empirical exercises have applied the same methods to other outcome variables such as education or health. Although these empirical exercise do not go as far as to get at variations in measures of intrinsic beings and doings, the seeming emphasis on income in empirical studies of inequality of opportunity is not the basis for differentiating the two. So what is left in comparing the two is in fact the focus on opportunity as opposed to achievements in both doctrines. As Sen (1987) famously says:

"……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" (p. 36).

The move from functionings to capabilities is the sharpest move from outcomes to opportunity as the basis of evaluation. It should be clear that the critiques advanced in the previous section on inequality of opportunity are thus are equally applicable to capabilities. Further, in Kanbur (1987) I had advanced an early critique of capability, in a response to Sen's (1987) Tanner Lectures using a particular example which centered on the role of risk and luck for two absolutely identical individuals:

"There are two individuals, Sen and Williams….and a cake….I will give them the option of either dividing the cake equally, or of tossing for the cake with a coin that is fair, and is known to be fair…..I want the example set up so that both choose to toss for the cake rather than, for example, divide it equally. with the result that after the toss one person has all the cake and the other has none….Suppose our egalitarian sentiments are aroused and we move to equalize the cake distribution….Sen might wish to argue that such redistribution reduces the standard of living of both Sen and Williams, since in effect denies them the opportunity to engage in lotteries with unequal prizes…..Should Williams be allowed the freedom to choose the probability of living a life of shame on the cake line?" (pp. 60-67)

The connection of this argument to the responsibility doctrines of different shades should be clear. Surely there are some outcomes that are so extreme that our moral intuitions must discard any notion of responsibility in deciding whether or not we move to protect the individual from that extreme outcome (for example starvation or indigence). Once this is conceded, it opens up the question of where the line is to be drawn where outcome dominates opportunity in evaluation, or whether a line can be drawn at all.

In a more recent critique, Robeyns (2015) has used different arguments to come to a similar conclusion, that functionings as outcome are at least as important as capabilities as opportunity:

"Let me call the first reason that we should allow a normative focus on functionings rather than capabilities *the reason from human nature*: we have to take people as they are, as persistently making mistakes in the process of making choices, and this could *prima facie* justify some form of (most likely very modest) paternalism if we use the capability approach for policy purposes, which would imply that we focus on functionings rather than capabilities…… The second reason that capabilitarian theories can be justified in focusing on a mix of functionings and capabilities is *an institutional reason*. A welfare state arrangement that offers citizens relatively generous welfare rights can legitimately induce or perhaps even force citizens and legal residents to choose certain functionings that are needed in order to justly reciprocate in that welfare state arrangement."

The first of Robeyns's (2015) reasons mirror the invocation by Kanbur (1987) of the observation by Shackle (1965) that "tomorrow's hunger cannot be felt today", in making the argument for redistribution after the event even when the choice was free and unconstrained.

However, Robeyns (2015) only uses these arguments to make the case, in contradistinction to Nussbaum (2011), that a "specific capabilitarian theory could focus not only on capabilities but also on functionings." My argument, transferring the critique of inequality of opportunity to a critique to capability theory, is stronger—that in concept as well as in practice, functionings have primacy over capability. Let me now look at the practicalities to see what is actually calculated by capability analysts—outcome or opportunity.

Let us start with the Human Development Index, whose introduction in 1990 was meant to signal the quantitative start of capability measurement. But what does it actually do? It takes a weighted sum of per capita income, mean years of schooling, and life expectancy at birth. Leaving to one side that too many capability purists having income in there is to confuse means and ends, all of these are outcome variables. Even if we took years of schooling as a measure of a functioning, it is clearly not a measure of the capability to achieve schooling, which would require measurement of the set of schooling items that were possible. Similarly, we could take life expectancy as a measure of health functioning, but to get a capability we would have to map out the set of possible health achievements, from which individuals exercise personal responsibility and choice to get the actual outcome we observe. Similarly, if we turn to the Sustainable Development Goals (SDGs) a related point can be made that they seem to be targeted to functionings rather than to sets of functionings, in other words, to capabilities.

Most recently, Alkire et. al. (2015) have proposed a measure of multidimensional poverty index, the Adjusted Head Count Ratio, which they argue is a measure of "capability poverty." As is by now well known, the Adjusted Head Count Ratio, denoted M_0, follows a "counting" approach to measuring multidimensional deprivation and implements a "dual cut-off" methodology. Given a set of achievements and a deprivation cutoff in each dimension, the method in effect counts the number of dimensions in which an individual is deprived and sets a threshold for this number above which the individual is classified as overall deprived (the method can be generalized by weighting each dimension but the essence of the method is unchanged). Those who do not cross this count threshold of deprivation are not in multidimensional poverty, even if they are deprived in some dimensions, albeit in fewer dimensions than the normatively chosen threshold.

Using this method, a multidimensional poverty index (MPI) has been reported in the UNDPs Human Development Report since 2010. The 10 dimensions in the empirical exercise are: schooling, school attendance, nutrition, mortality, electricity, sanitation, water, house flooring, cooking fuel and assets. One may ask why these dimensions and not others, and quite often the answer is given in terms of data availability across countries. In each dimension there is an appropriate cutoff for deprivation, for example by applying relevant standards for undernourishment. The M_0 measure is then calculated and reported by UNDP, and by other researchers and analysts in similar vein in a fast growing literature.

The question, however, is whether the M_0 measure, in concept and in practice is a measure of capability poverty, a question posed by Alikre et. al. (2015, pp. 188-190). Their answer is in the affirmative:

"Suppose that there are a set of dimensions, each of which represent functionings or capabilities that a person may or may not have—things like being well nourished, being able to read and write, being able to drink clean water, and not being the victim of violence. The deprivation profile for each person shows which functionings they have attained and in which they are deprived…Furthermore, suppose we can anticipate what percentage of people would refrain from achievements in certain functionings—those who might be fasting to the point of malnutrition at any given time…..[I]f people who are poor and are deprived in a dimension would value being non-deprived in it, then we anticipate that deprivations among the poor could be interpreted as showing that poor people do not have the capability to achieve the associated functionings. Thus M_0 would be a (partial) measure of unfreedom, or capability poverty….Note that this capability interpretation of M_0 does not directly represent 'unchosen' sets of capabilities in a counterfactual sense (Foster, 2010). Nor does in necessarily incorporate agency (Alkire, 2008). Rather, in a manner parallel to Pattanaik and Xu [1990] it *interprets* the deprivations in at least a minimum set of widely valued, achieved functionings as unfreedom, or capability poverty" (pp. 188-190).

This quote from Alkire et. al. (2015) illustrates the hoops through which one has to jump in order to make a measure built on outcome to speak to opportunity. It should also be clear from the UNDP MPI example that the actual indicators on the different dimensions are all outcome variables. It would take considerable further argumentation, perhaps along the lines of Alkire et. al. (2015) above, to make them speak to opportunity and hence to capability. As a practical matter, it would seem that even those who claim their exercises to be motivated by the twin defining attributes of the capability approach are in effect making use of only the first, the broadening to functionings in many dimensions, and relying on interpretation and extrapolation to reach to the second, the leap to opportunity from outcome.

Conclusion

Two fundamental attributes of the capability approach are (i) a broadening of the evaluation space from the instrumental means such as income to the intrinsic ends of beings and doings, or functionings; and (ii) the further broadening of evaluation from achievement of ends to opportunity to achieve those ends—from functionings to capabilities. This paper accepts the first broadening but presents a critique of the opportunity perspective in capability theory, using as a platform a critique of recent work on inequality of opportunity. The paper argues that similar critiques of concept and empirical application apply to capability analysis as an analysis and an evaluation of opportunity. Perhaps for this reason, much of the practical implementation of capability theory ends up by in fact focusing only on outcomes in functionings space, with only a loose link to opportunity. There is much still to be explored about the deep roots of capability theory. Its rejection of consequentialism, perhaps as part of a broader move away from Utilitarianism, will need to be examined in the context of potential critiques of these moves from

the broader philosophical perspective. In the meantime, however, I have argued that one of the two fundamental attributes of the capability approach is on a stringer footing than the other.

References

Alkie, Sabina. 2008. “Choosing Dimensions: The Capability Approach and Multidimensional Poverty.” In N. Kakwani and J. Silber (Eds.), *The Many Dimensions of Poverty*. New York: Palgrave MacMillan, pp. 89-119.

Alkire, Sabina, James Foster, Suman Seth, Emma Santos, Jose Manuel Rochae and Paola Ballon. 2015. *Multidimensional Poverty Measurement and Analysis*. Oxford University Press.

Anderson, Elizabeth. 1999. “What Is the Point of Equality?”, *Ethics* (109): pp. 287-337.

Arneson, Richard. “Equality and Equal Opportunity for Welfare”. *Philosophical Studies*. Vol. 56, pp. 77-93.

Berlin, I. (1958) “Two Concepts of Liberty.” In Isaiah Berlin (1969) *Four Essays on Liberty*. Oxford: Oxford University Press.

Bourguignon, F., Ferreira, F.H.G., and Menéndez, M. (2007). Inequality of opportunity in Brazil. Rev Income Wealth Vol. 53(4): pp. 585–618.

Chiappero-Martinetti, Enrica. 2009. “Poverty as Lack of Opportunity: A Comparison Between John Roemer and Amartya Sen.” *Rivista Italiana di Economia Demografia e Statistica,* Volume LXIII, pp. 71-90.

Cohen, G.A. 1989. “On the Currency of Egalitarian Justice.” *Ethics*. Vol. 99. pp. 906-944.

Dworkin, R., 1981a, “What is Equality? Part 1: Equality of Welfare,” *Philosophy and Public Affairs*, Vol. 10: pp. 185-246.

Dworkin, R., 1981b, “What is Equality? Part 2: Equality of Resources,” *Philosophy and Public Affairs*, Vol. 10: pp. 283-345.

Ferreira, F.H.G, and Gignoux, J. (2011). The measurement of inequality of opportunity: theory and an application to Latin America. Rev Income Wealth Vol. 57(4): pp. 622–657.

Ferreira, F. H. G., and Peragine, V. (2015). Equality of opportunity: Theory and evidence. IZA Discussion Paper No. 8994.

Fleurbaey, Marc and Francois Maniquet. *Equality of Opportunity: The Economics of Responsibility*. World Scientific.

Foster, James. 2010. “Freedom, Opportunity and Wellbeing.” In K. Arrow, A. Sen, and K. Suzumura (Eds.), *Handbook of Social Choice and Welfare.* Amsterdam, Elsevier, pp. 687-728.

Hufe, Paul, Andreas Peichl, John Roemer and Martin Ungerer. 2015. “Inequality of Income Acquisition: The Role of Childhood Circumstances.” ZEW Center for European Economic Research. Discussion Paper No. 15-084.

Kanbur, Ravi. 1987. “The Standard of Living: Uncertainty, Inequality and Opportunity,” in Sen, Amartya. 1987. *The Standard of Living*, Tanner Lectures with rejoinders by Bernard Williams, John Muellbauer, Keith Hart and Ravi Kanbur, edited by G. Hawthorne, Cambridge: Cambridge University Press. pp. 59-69.

Kanbur, Ravi. 2016. “Of Consequentialism, Its Critics, and the Critics of Its Critics.” Dyson School Working Paper No. 2016-02.

Kanbur, Ravi and Adam Wagstaff. 2014. “How Useful is Inequality of Opportunity as a Policy Construct?” World Bank Policy Research Working paper No. 6980.

Kaufman, A. 2006. “Capabilities and Freedom,” *Journal of Political Philosophy*, Vol. 14(3): pp. 289–300.

Niehues, J. and Peichl, A. (2014). Upper bounds of inequality of opportunity: theory and evidence for Germany and the US, Social Choice and Welfare, Vol. 43(1): pp. 73-99.

Nussbaum, Martha (2011a) *Creating Capabilities: The Human Development Approach.* Cambridge, MA: The Belknap Press of Harvard University Press.

Paes de Barros R, Ferreira FHG, Vega JRM, Saavedra JC, De Carvalho M, Franco S, Freije-Rodriguez S, Gignoux J. 2009. *Measuring Inequality of Opportunities in Latin America and the Caribbean*, World Bank: Washington, DC.

Pattanaik, P. K. and Y. Xu. 1990. “On Ranking Opportunity Sets in terms of Freedom of Choice.” *Recherches Economiques de Louvain*, Vol. 56, pp. 383-390.

Peragine, Vito and Francisco Ferreira. 2015. “Equality of Opportunity: Theory and Evidence.” World Bank Policy Research Paper No. 7217.

Rawls, John. 1958. “Justice as Fairness.” *The Philosophical Review*. Vol. 67, No. 2 (April) pp. 164-194

Rawls, J., 1971, *A Theory of Justice*, Cambridge, MA: Harvard University Press.

Robeyns, Ingrid. 2011. "The Capability Approach", *The Stanford Encyclopedia of Philosophy* (Summer 2011 Edition), Edward N. Zalta (Ed.), URL = <http://plato.stanford.edu/archives/sum2011/entries/capability-approach/>.

Robeyns, Ingrid. 2015. “Capabilitarianism.” Processed.

Roemer J. 1998. *Equality of opportunity*. Harvard University Press, Cambridge MA.

Roemer J. 2002. *Equality of opportunity: a progress report*. Social Choice and Welfare, Vol. 19, pp. 455-471.

Roemer J. 2009. *Equality: its justification, nature and domain*. Salverda W., Nolan B., Smeeding T., *The Oxford Handbook of Economic Inequality*, pp. 23-39, Oxford University Press.

Roemer, John E. and Alain Trannoy. 2014. "Equality of Opportunity." In A.B. Atkinson and F. Bourguignon (Editors), *Handbook of Income Distribution*, Vol. 2, pp. 217-300, Elsevier.

Sen, A., 1980, "Equality of What?" in McMurrin (Ed.), *Tanner Lectures on Human Values*, Cambridge: Cambridge University Press.

Sen, A. 1985. *Commodities and Capabilities*, Amsterdam: North-Holland.

Sen, Amartya. 1987. *The Standard of Living*, Tanner Lectures with rejoinders by Bernard Williams, John Muellbauer, Keith Hart and Ravi Kanbur, edited by G. Hawthorne, Cambridge: Cambridge University Press.

Sen, Amartya, and Bernard Williams. 1982. *Utilitarianism and Beyond*. Cambridge University Press.

Sen, A. 1999, *Development as Freedom*, New York: Knopf.

Sen, A. 2002, *Rationality and Freedom*, Cambridge, MA: Harvard University Press.

Shackle, G. L. S. 1965. "Comment on Two Papers on Time in Economics." *Artha Vijnana*, pp. 55-59.

Wagstaff, Adam and Ravi Kanbur. 2015. "Inequality of Opportunity: The New Motherhood and Apple Pie?" *Health Economics*, Vol. 24, No. 10, pp. 1243-1247,

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