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## Capability Approach: A Formal Introduction

By Dorian Fernando LEON <sup>†</sup>

**Abstract.** The capability approach has been made operable and an example is the Human Development Index and the Multidimensional Poverty Index (Dotter & Klasen, 2014). However, its operable nature in the field of evaluation of specific dimension such as education, gender and poverty from a diffuse perspective is even broader (Addabbo, Di Tommaso & Facchinetti, 2004; Martinetti, 2006; Addabbo & Facchinetti, 2013). In this sense, this article aims to provide a very brief formal approximation to the capability approach, mainly focusing on some their fundamental concepts.

**Keywords.** Capability approach, Functioning, Amartya Sen.

**JEL.** I31, I32, D63.

### 1. Introduction

At present the capability approach (Henceforth CA) is attracting of attention from scientists and researchers of the human and social sciences (see Note 1 at the end). The reason for this lies on the importance of this approach not only as an assessment framework but as an ‘easily’ operable and flexible tool where the construction of the Human Development Index (HDI) and Multidimensional Poverty (MPI) stand out which offer greater objectivity for the measurement of people’s life quality (see Note 2 at the end)

The motto of capability approach is translated in that the welfare is evaluated better in terms of "capabilities", that is to say, what people want to be or do to function and that it includes what these have reasons to value. In this sense, "capability" means freedom or more specifically, real opportunity to be and to do what is valued for each one and that consequently, this is what allows to functioning correctly (Robeyns, 2003).

On the other hand the CA on having taken as a center the real and effective opportunity of people, applies a differential approach, in other words, heterogeneous, where the pregnant woman's not the same as the one who is not it, or a person who fasts than which person's obligated to endure hunger, or that one whom the context favors of that one that this one restricts. These are the reasons why capability approach provides a base informacional wider than that one centred on *primary goods* or in the resources.

Similarly for some authors like Ingrid Robeyns this approach does not explain social phenomena like poverty, the inequality and the exclusion; but rather, it is purposed to conceptualize these phenomena (e.g. see Robeyns, 2005; 2016). Which means, the approach allows the individual assessment and the social advantage analysis. In this sense Sen (2011) sustains that the CA can make a meaningful contribution to the justice theories: because justice is fosters when people enjoys of more freedoms to live a life which has reasons to value.

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It should be noted that, some aspects of the capability approach, go back, between others, to Aristotle, Adam Smith, John Stuart Mill and Karl Marx (Robeyns, 2003; Clark, 2005; Alkire, 2010).

Additional, this approach there is been extended thanks to the contributions of several authors, where Martha Nussbaum stands out, not only for offering a proposal centred on justice, but also about feelings (see Nussbaum, 1992; 2002; 2004). In contrast to Sen who proposes an approaching with major interests and applications in topics of poverty and inequality (e.g. see Sen, 1981) see Note 3 at the end.

### 2. Capability as positive freedom

The capabilities approach is closely related to the concept of positive freedom (Robeyns, 2011; Deneulin & Shahani, 2009), that is, that type of freedom centered on the opportunities to choose life that is valued with justified reasons, in this sense it distances itself from other approaches more «or entirely» centered on the negative freedom –liberty:see Note 4 at the end-.This distinction is important insofar as it departs from some proposals like those of authors like Nozick who propose a theory of law related to the negative concept of freedom (see Sen, 1988).

For freedom in a positive sense, Sen understands, that a person's really capable of doing this or being that (Sen, 1989). In this respect he says: "If I did not have the possibility to walk freely in the park because i am handicapped this would go against my positive freedom" (Sen, 2003, p.37).

However, it also says "freedom understood positively refers to what having everything into account, a person can actually fulfill. In other words, it is not so much a matter of discriminating whether [...] the inability of a person to achieve a certain objective is due to restrictions imposed by other individuals or by the government" (Sen, 2003, p.36).

Taking into account that by the capability Sen (1993) understands a concept that informs better about the welfare and advantage of a person's, it can be seen that its emphasis is on proposing an approach where the difference between equal opportunity to be able able to choose is minimal and not necessarily null as in the case of *transcendental institutionalism* (Ege, Igersheim & Le Chapelain, 2016; see Pogge & Alvarez, 2010; Sen, 2011), since it is impossible to construct a state of affairs where a disabled will have freedom in every sense in comparison to those who are not . However, the dimensions of the barriers can be reduced and even eliminated, reaching certain functionings (see, Nussbaum, 2009). Consequently, the limitations must be taken into account in the assessment of the standard of living.

### 3. Formalization

For Sen (1993) capability refers to a space of potential (capabilities) and actual choices (functioning). The former do not represent what is truly realized "selected" or concrete, but rather they are the ones that allow one to compare one life to another (Alkire, 2005). The last, that is to the concrete and realized choice "achievement" is called functioning and can be represented by a vector of the form  $b_i = f_i(c(x_i))$ . In this sense for Basu & López-Calva (2011) in the Sen's model  $f$  is in part a question of the choice of person  $i$ 's. The individual chooses a function of utilization of the possible set,  $F_i$  «that is,  $f_i \in F_i$ » utilization function of  $i$ , by which they convert characteristics into functionings.

It should be noted, however, that (1) due to certain factors - which are of a personal, social or environmental nature - a person could not have chosen  $f_i$ , even though this "utilization function" was valuable to him (see, Deneulin, 2011) 'let's call it  $f_i$ ', therefore, (2) being able to reach  $b_i$  is subject (Robeyns, 2000) to achieved  $f_i$ , but to achieved  $f_i$  isn't only a matter of the choice of person  $i$ 's, rather is a matter of being able to choose the function taking into account such factors,

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which is why the space of goods are restricted to those over which people have the capability that allow them to access their characteristics "let's call it  $X_i$ ".

More concretely, if  $x_i$  = vector of commodities of person  $i$ 's. Following to Gorman and Lancaster, Sen proposes:  $c(\bullet)$  = the function not necessarily linear (Sen, 1996; Harsanyi, 1996) that converts a property vector into a feature vector  $y$ ,  $f_i(\bullet)$  = a function of  $X_i$  that taking into account the internal and external factors  $z_k$  that person  $i$ 's we obtain a functioning of the form  $b_i = f_i(c(x_i))$ , which consequently reflects what I can achieved-to be or actually do.

Now, note that given  $x_i$  and more specifically, given  $c(x_i)$ , can to apply  $f(\bullet)$  over  $c(x_i)$  to obtain a  $b_i$  functioning that represents an advantage (see Note 5 at the end), that is, a can to choose  $f_i$ . What by definition supposes to have counted on capability or freedom. In other words, functioning may be a direct or indirect requirement for capabilities (Gandjour, 2008).

In short, the possession of commodities does not confer any well-being, if it cannot be used. For example, if a bicycle that could be used to achieved a  $b_i$  functioning.

The person in question is paraplegic: even if he possesses the commodities and consequently, all his attributes or characteristics, he could not choose  $f_i \in F_i$ , that is, the personal use function that would allow it to be mobilized.

Perhaps, it can choose a  $f_i \in F_i$ , eg use it as a model to draw it, however, this does not represent any functioning, since what interests us is to make use of its attributes as a means of transport (see Note 6 at the end) but since it is not fulfilled that  $f_i = f_i^*$ , therefore, it is not true that  $f_i$  is therefore valuable for  $i$  (see Williams, 2003), eg, a person  $i$ 's At a disadvantage *vis-a-vis* another person  $i^*$  who could choose  $f_i^*$  (obviously it is understood that for both  $i$  and  $i^*$  the weighting or valuation of  $f_i^*$  is the same). In other words for Sen (1993), when the capability approach is applied to a person's advantage, what matters is to assess it in terms of its real capability to achieved valuable functioning as part of life

Finally, if a  $P_i(x_i)$  is defined as a set of possible functionings of person  $i$ 's, it can be expressed as:  $P_i(x_i) = [b_i \mid b_i = f_i(c(x_i)), \text{ for } \forall f_i \in F_i]$ . Then, if the vector of commodities chosen  $x_i$  by the person is restricted to the set  $X_i$  - which it involves to map  $c(x_i)$  to  $f_i$  to obtain from there to  $b_i$ - then this set represents his rights and consequently,  $Q_i(X_i) = [b_i \mid b_i = f_i(c(x_i)), \forall f_i(\bullet) \in F_i \text{ y } x_i \in X_i \text{ y } z_p, z_s, z_c]$  the freedom or capability.

### Notes

**Note 1.** The capability approach is a proposal that without being parallel to the utilitarianism, yes it is the one that more takes distance of this one. Essentially, and from an economic point of view, this approach recognizes and warns the importance of ethics.

**Note 2.** Both indexes allow countries to track the reality of their development. Therefore, the per capita gross domestic product is useful in the assessment of the economic growth, but very inefficient as a Human Development's metric: this affirmation does not suggest discarding the importance of income in people's quality of life, but rather, to confirm that this is just a medium and not the end.

**Note 3.** Nussbaum's affirms that the main topic of Sen's is the quality of life, while she is the search for the social justice and democracy in a liberal framework.

**Note 4.** Sen is interested in negative freedom in a sense that goes beyond the restrictive perspective "as is the case of Nozick", because, transcending this concept as it says, you can help others when their rights are threatened. For example, the right not to suffer hunger

**Note 5.** In this case who can apply  $f(\bullet)$  against who cannot do

**Note 6.** This consideration arises inasmuch as one might object that such commodities has other attributes than to serve as a means of transport. However, it is hardly plausible to suppose that these are merely attributes that even though they are there are irrelevant "save certain particular cases". For example, Sen warns that the utilitarian could assign some value, simply because someone can enjoy only the presence of this commodities, or because he likes its color.

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