

THE CAPABILITY APPROACH: THEORETICAL DISCUSSION IN LIGHT OF A DESIGN PROJECT

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ABSTRACT

Technological solutions can play a vital part in promoting development. This article will discuss the potential of using the capability approach in the practical design work, based on field study of energy solutions for refugees in eastern Ethiopia.

Extensive literature discusses capability approach in disciplines ranging from philosophy to economics. In technological studies research is conducted in a totally different manner. This article is a contribution to the understanding of how the capability approach can be applied in a practically in design.

Keywords: Capability Approach, Design for development, Social Design, Design Methodology

1 INTRODUCTION

The starting point of this article was Ilse Oosterlaken's article Design for Development: A Capability Approach, which was published in the journal Design Issues in the autumn of 2009. In this article Oosterlaken points to a lack of focus on development and global justice within the field of design. She argues that there are well-developed theories around designing for a market, but little on the field of social design. For this purpose she suggests the capability approach as an alternative theoretical framework.

The economist and philosopher Amartya Sen first introduced the capability approach in 1985. It is a theoretical framework for assessing well-being without imposing one's own notions about what a good life should contain. Sen's motivation to develop this approach was dissatisfaction with the existing methods in this area (Robeyns 2011). Applications of the approach have so far ranged from assessing small-scale development projects to gender inequalities (Robeyns 2005). There has however been considerable discussion around the applicability. Oosterlaken sees technological development and industrial design as an expansion of human capabilities, and thinks that the details in design should be considered in this perspective (Oosterlaken 2009).

1.1 Research gap and approach

To the authors knowledge there is no literature on the practical applicability of the capability approach in a design context. In this article a step will be taken in that direction. The focus will be on identified challenges regarding the applicability of the approach. Through revisiting a previously conducted student project the issues defined in literature will be discussed in a practical design context.

This article starts with a presentation of the capability approach to clarify the motivation and idea behind it. The theoretical discussions around the approach will then be presented with the identified challenges of its applicability. These challenges will then be discussed in light of the aforementioned student project.

1.2 Introduction to student project

The student project in question is based on a case study of an ethanol cook stove provided for refugees in the camp Kebribeyah in eastern Ethiopia. The camp was set up to receive refugees from Somalia at the onset of the civil war in 1991. Most of the refugees have lived there since.

Semi-structural interviews with refugee women were central in the field study, supported by observation when cooking, general observation in the camp, semi-structural interviews with stakeholders involved and a visit at touchpoints between the refugees and the service of household energy provided for them.

During the first trip to the refugee camps it became evident that the main challenge concerning the stove was the provision of ethanol. This led the refugees to use the available but expensive alternatives firewood and coal. In the eastern part of Ethiopia the use of firewood has been banned, because the area has been deforested extensively the last years. Without the ethanol the refugees are forced to break this law to be able to cook the rice they are provided.

2 THEORETICAL BACKGROUND

The capability approach is a framework pioneered and advocated primarily by Amartya Sen and Martha Nussbaum. It arose from the need to measure progress in development, and the dissatisfaction with existing methods in the field of economy (Robeyns 2011).

Many existing methods in economy measures progress by looking at hard facts like the income level in a country or the amount of resources accessible to its inhabitants. The GDP is a number often used to compare countries' levels of development. This however says nothing about how the resources are distributed within the population. Discrimination on the basis of gender, ethnicity or disabilities is hence not accounted for. One can for instance see that South Africa had a quite high GDP during the apartheid years (Nussbaum 2011).

Other approaches like the Gini coefficient (Yitzhaki 1979) are based on economic growth while also accounting for the distribution of resources. However, Amartya Sen and Jean Dreze has found evidence that economic growth does not directly lead to better health care or education systems, elements that must be considered central in a development context (Sen and Dréze 2002).

The goal of developmental work may be seen as giving everyone a good life. So why not measure happiness? This is the aim of the utility approach. It is based on quantifying people's satisfaction with different aspects of their lives (Nussbaum 1997). Happiness is however a relative and abstract quality that is hard to convey in words, much less numbers. One could also say that since the ultimate goal in the utility approach is a state of happiness, it is the conditions at the current that is important in the assessment. That people have a say in these conditions is hence not valued. In the extreme one can say that with a government that make people happy, democracy is no longer important (Nussbaum 2011). The Human Rights approaches come closer to the philosophy behind the capability approach. They aim to secure the freedoms that are central for human beings (Alexander 2004). The Universal Declaration of Human Rights is a good example of such an approach in practice. There is however a central weakness in these approaches, pointed out by Nussbaum. In her opinion the term "right" can be understood in many different ways, meaning that this approach lacks clarity. Through this reasoning we have come to the centre of the capability approach. What Sen and Nussbaum suggest as a solution is looking at "what people are effectively able to do and be" (Alkire 2005). There are three main terms discussed in this context; functionings, capabilities and agencies. The functionings of a human being describes what the person does, has and is, in other words the realized aspects of his or her life. The capabilities on the other hand are the functionings that are effectively realizable for this human being, meaning the opportunities that in reality exist. This distinction is made to avoid cultural bias, because there is no need to define good and bad choices if one focuses on capabilities. The term agency is closely related to that of capability. Capability can be seen as the freedom to enjoy various functionings (Alkire and Deneulin 2009) while agency is a person's ability to pursue and realize those functionings. Agency hence accounts for the individual differences in the choices people make.

Up to this point in the discussion Sen and Nussbaum agree. The capability approach is still a very vague framework, which is also the background for their debate. Sen advocates keeping the approach at this level, because its strength lies in the fact that it is not biased. Any evaluations of which capabilities that are important to a human being would be to ascribe the target group values they might not share. Relevant capabilities are subject to both purpose and context and should in his opinion not be decided by theorists (Sen 2004). Nussbaum argues that by keeping the approach this vague, one cannot exploit its full potential. In her opinion the approach in this form can only be applied comparatively, comparing regions or nations on a certain aspect, but that the approach also has a potential for normative use (Nussbaum 2011).

A normative use of the approach means that it inflicts a judgement between right and wrong. Nussbaum sees the potential for evaluating social justice in a country without comparisons, and hence the use in processes like constitution making (Ibid.). She goes on to define a list of ten basic

capabilities that she finds universal on philosophical grounds. The list is developed with a basis in what human dignity depends on, and consists in her opinion of the most basic elements. The capabilities are mutually supportive, but cannot replace each other.

3 PRACTICAL APPLICATION

3.1 Defined challenges

The capability approach has been discussed widely, but since the birth of the capability approach in 1985 the empirical evidence is still very limited (Robeyns, 2006). Through a review of studies applying this approach Robeyns have found that nearly all applications have been quantitative. All the quantitative applications have been built on existing surveys, and all are mainly based on functionings. This gives little background for discussing the possible impact of using this approach and the discussion is primarily on a theoretical level.

On one hand the capability approach has received critique for not bringing anything new to the table. Some say that the approach is too closely related to existing methods and frameworks in the social sciences. An answer to this is that the approach is still quite revolutionary within the field of economics, where it has its origin. In design, like in the social sciences, focusing on the human being is not new.

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Ingrid Robeyns has worked on operationalizing the approach, and accuses the approach of being "radically underspecified" (Robeyns 2006). She points out three problematic areas where specification is needed for the capability approach to be useful in practice.

3.2 Challenges in light of design project

One of the main arguments Oosterlaken gives for applying this approach in the field of design is that the goal of technological development is to expand our capabilities as humans (2009). That it is relevant does not however prove that the capability approach is valuable for the design process. This requires that it has a potential to expand on the existing methodology.

The problematic areas defined by Robeyns will now be used to evaluate the use of the capability approach in the previously mentioned case study/design project.

3.2.1 Deciding between functionings and capabilities

Sen and Nussbaum have in their work paid greatest heed to capabilities. By looking at the possibilities people actually have, they see great potential for evaluating the quality of life. For other purposes it might be more relevant to look at functionings, what a person is, has and does, depending on the aim of the research. The latter option is more applicable in practice, simply because it is easier to observe what people do than to find out what they have the possibility to choose. However the main innovation with this approach lies in the capability dimension, which is what separates it from the existing approaches.

As is true for different types of research, design projects will also have different aims or motivations. Functionings will naturally be interesting in a project with focus on functionality, first introduced through the field of ergonomics following the invention of the fin the 1960s (Øritsland and Vavik 2008). Capabilities, being tied to the possibilities that are effectively available, contain a social dimension especially suitable in social design.

Though it was not discussed in the design team beforehand, there was a clear social motivation behind the student project. To look at capabilities would hence be a natural choice. However, studying the interview guides and the terminal findings from the field study, the definition of the term capability is not so clear anymore. How do you define which options that are effectively available to someone? The interview guides from the field study does not focus mainly on which choices that were available to the refugees, but also on what they chose and what they wanted to choose. The need for such a broad spectrum can be explained by the relativity of the term capability.

Naturally, if a choice is available to someone or not theoretically is not the same as it being *effectively available* as the original definition states. Though a refugee can deliver a broken stove to the technician, this might not be effectively possible. The family has to do without the stove in the meantime, the stove has to be delivered at a certain time and the refugees need to receive the information as to how this system works. Suddenly if a choice is effectively available is very relative. How long can the reparation take for it to be an actual option to the refugees?

3.2.2 The selection of relevant capabilities

Nussbaum and Sen agree upon that the capability approach needs to be adapted to the context, but they disagree on the level of this adaptation. Even with the list Nussbaum provides, Robeyns sees the need for further specification for the approach to be applicable in practice (Ibid.). There have been extensive discussions around how this should be done, ranging from theoretical evaluations to survey based statistical methods.

In a practical design project there is a greater liberty of defining what kind of information one is looking for, compared to academic research. The selection of relevant capabilities is still very dependent on the context, but the requirements for scientific accuracy in design project is not as strict as in academic research. The designer uses a combination of creativity and analysis when planning a design process, and is a possible approach here as well.

Designers should of course strive towards scientific perfection in their methods, but in practice this is utopic. There will always be some practical constraints that lead to trade-offs. This can be illustrated with the case study from Ethiopia. Before doing interviews in the refugee camps, the phrasing of the interview guide was thoroughly planned to not be suggestive and to provide the relevant answers. In the interview setting the planned guide could not be followed. Phrasings had to be simplified to ensure that the questions were understood, and leading questions had to be used for confirmation of a common understanding of the information that was given. To not be suggestive but at the same time be very clear and basic in your communication is not easy. With a communication chain going from English to Amharic to Somali to Amharic to English again, scientific perfection cannot possibly be achievable. The challenges discussed in theory hence are distant from this kind of project.

Choosing relevant capabilities for a project can be a challenge, but the experience from this project is that it is beneficial for a team to take that discussion to ensure they are working towards the same aims. However, here the discussion happened after the field study was conducted after having processed the information retrieved. As might hold for true for many design projects, the selection of relevant capabilities ultimately came from the users themselves.

3.2.3 The weighting of different capabilities

The importance of each capability is not necessarily equal. To use this approach in quantitative research one is dependent on quantifying the relative weights of capabilities. Three methods for doing this have been presented in literature (Robeyns 2006). The first method is that the researcher chooses the relevant capabilities based on theory or contextual circumstances, a second applied method bases the weighting on statistical methods, derived from surveys or similar, and a third is based on letting the relevant group of people decide the weights. This could for instance involve participatory methods. Sabina Alkire finds the necessary evaluation of dimensions an advantage, because it forces a thorough evaluation of the trade-offs that are being done (2002).

When weighting different capabilities the challenges regarding bias and scientific accuracy are also central, which relates to the experiences described in the last section. Weighting does not necessarily mean to assign each capability a value but to do some kind of comparative evaluation of their importance. In this field study such an evaluation could possibly have structured the process of choosing a goal for the design project, but the aim that was ultimately chosen would most likely have been more or less the same.

4 CONCLUDING REMARKS

Through looking at the theoretical discussion around the capability approach in light of a practical design project it seems likely that the challenges discussed are of less importance if the framework was applied in a practical project. At the same time other issues arise that need to be considered, since real life is not as black and white as the theories behind it.

The terminology and problems discussed is easily connected to a practical design project, which implies an absolute relevance of the capability approach to the field of design. Whether it has a value to add is however not considered in this discussion. This requires that it can expand on the existing methodology, which is an interesting topic for further research.

REFERENCES

- [1] Oosterlaken, I., Design for Development: A Capability Approach. *Design Issues*, 2009, Vol.25, No.4
- [2] Robeyns, I., Sen's capability approach and gender inequality: Selecting relevant capabilities. *Feminist Economics*, 2011, 9:2-3, 61-92
- [3] Robeyns, I., The Capability Approach: a theoretical survey. *Journal of Human Development*, 2005, 6:1, 93-117
- [4] Nussbaum, M., Creating Capabilities: The Human Development Approach. *University of Chicago, USA*, 2011
- [5] Yitzhaki, S., Relative deprivation and the Gini coefficient. *The Quarterly Journal of Economics*, 1979, 321-324.
- [6] Dreze, J., & Sen, A. K.. *India: Development and participation*, 2002 Oxford University Press.
- [7] Nussbaum, M. C., Capabilities and human rights. *Fordham L. Rev.* 1997, 66, 273.
- [8] Alexander, J. M. Capabilities, human rights and moral pluralism. *The International Journal of Human Rights*, 2004, 8(4), 451-469.
- [9] Alkire, S., *Valuing freedoms: Sen's capability approach and poverty reduction*. 2005, Oxford University Press.
- [10] Alkire, S., & Deneulin, S. A normative framework for development. *An introduction to the human development capability approach*, 2009, London: EarthScan.
- [11] Sen, A., Capabilities, lists, and public reason: continuing the conversation. *Feminist economics*, 2004, 10(3), 77-80.
- [12] Alkire, S. (2002). Dimensions of human development. *World development*, 2002, 30(2), 181-205.
- [13] Øritsland and Vavik. God I Bruk, 2008
- [14] Robeyns, I., The Capability Approach in Practice, *The Journal of Political Philosophy*: Vol. 14, 2006, No. 3, pp. 351–376