

# Complementarity of Resource and Capability: Economic Philosophical Discussions about Distribution Rule in Global Justice

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## 1. Introduction

This paper discusses the complementarity of the resource concept referred to in political philosophy and capability. The concept of capability indicates an individual's actual ability to achieve various valuable doing or being. This discussion aims to provide preliminary consideration for designing distribution rules in global justice. In particular, the central idea of complementarity is motivated by how the computational complexity of information processing of needs evaluation can be reduced from a capability perspective.

As revealed by philosopher Martha Nussbaum, the unsolved problem of global justice is a frontier for theories of justice (Nussbaum 2006). Indeed, theories of global justice play important roles when we consider world poverty and the global burden of disease.

This study does not comprehensively examine theories of global justice, but limits the discussion to distribution rules, regarded as part of global justice. The term *distribution rule* is defined here as follows: Given initial endowment such as goods or resources in a society, distribution rule is a correspondence that assigns a domain comprising some informational basis to the range of profiles distributed to each individual. Moreover, this study does not discuss the productive economic model in which each individual utilizes initial endowment for production. Instead, the argument concerns how fixed initial endowment can be distributed to people at a point in time.

First, this study draws attention to the following problem: What do we choose from informational bases, for example, welfare, resource, and capability? The choice of informational basis is studied in the field of normative theories that address the following questions, "Equality of What?" and "What is the right measure of justice?" (e.g., Sen 1980; Brighouse and Robeyns 2010).

Regarding the problem of choice of informational basis, this study exclusively examines resources including income and capability. The concept of resource here suggests John Rawls's social primary goods and Ronald Dworkin's resource (Rawls

1971; Dworkin 2000). Capability, as suggested by Amartya Sen who criticized the concept of resource for distribution, has become an important new paradigm in economics, philosophy, and other disciplines.

However, despite its theoretical and practical attractiveness, there has been skepticism about the usefulness or justification of capability. One of most crucial criticisms of capability is Thomas Pogge's argument (Pogge 2002, 2010). Pogge claims advantages of resource or "resourcism" as alternative capability. Furthermore, he suggests *Global Resources Divided* (hereafter GRD) for eradicating world poverty. We may interpret GRD as a distribution rule based on the concept of resource (Pogge 2008, ch. 8).

Some studies, for example, Berges (2007) criticize the advantage of resource suggested by Pogge (2002, 2010). [1] This study scrutinizes the dichotomous idea of "resource versus capability," and indicates the importance and difficulty of converting resource into individual well-being. With this background, this paper raises a strong possibility of the complementarity between capability and resource by referring to Van Parijs (1995), Robeyns (2005), and Gotoh (2009).

Through the argument of complementarity, this study aims to design two layered-distribution rules. The first layered-distribution rule is GRD, and the second is the *Application of Capability Theory to Needs Based Equitable Distribution Rule* (hereafter ACTNBEDR). ACTNBEDR is similar to Japanese public assistance additional payments. However, in ACTNBEDR, the concept of needs is judged by the capability theory that reflects public reasoning, and is related to the concept of threshold in Nussbaum (2000).

Let us discuss these distribution rules from the perspective of economic philosophy. In this study, the term *economic philosophy* is defined as the method that explicates the concepts behind fundamental theories, current institutions and policies, and alternative conceptions regarding the economic phenomenon in the broad sense. There are two main merits of being-based economic philosophy for considering these problems in this paper. Economic thinking is effective for utilizing the fruit of normative theory discussion for creating real institutions and policies. One merit is that the discussion from normative theory to economics is easily translated into economic philosophy. Another merit is that we can consider the design concepts of distribution rule through philosophically reexamined ideas premised in economics, normative theories, and real/alternative institutions.

The structure of this paper is as follows. Section 2 briefly reviews capability and resource. In section 3, the complementarity of basic income and undominated diversity, suggested by Van Parijs (1995), is critically examined for clues to the complementarity between resource and capability. Section 4 discusses the complementarity between GRD and ACTNBEDR derived from scrutiny of the Japanese public assistance additional payment.

## 2. Resource and capability: A short review

First, this section scrutinizes the definition of capability and resource. The capability of a person reflects an alternative combinations of functionings that the person can achieve (Sen 1985a). Furthermore, functionings represent parts of the state of a person, in particular the various things that he or she manages to do or be in leading a life. Some functionings are very elementary, such as being adequately nourished or being in good health. Other functionings may be more complex, such as achieving self-respect or being socially integrated (Sen 1993, p. 31). For example, let us consider a commodity such as bread. It has some functionings, for example, providing nutrition, aiding gatherings over food and drinks, and meeting the demand of social conventions or festivities (Sen 1985a, p. 17). Therefore, the conversion of a commodity into personal achievements of functionings depends on a variety of factors—both personal (internal) and social. This is a crucial point for special needs such as those of disabled persons, children, and elderly persons.

The concept of resource is referred to in several academic papers. For example, Dworkin (1981b) composed one of the most famous concepts. He defined a suitable concept for equality of “resource” as alternative equality of welfare, which is discussed in Dworkin (1981a). Dworkinian resource includes a person’s physical and mental traits. Therefore, a person who is born handicapped begins with less by way of resources than others (Dworkin 1981b). Five types, including the Dworkinian resource, are mentioned by Robeyns (2005, pp. 35-36). Type 1 is gross national product (GNP) per capita, and type 2 is individual disposable income; these ideas are very easy to understand. Type 3 is individual entitlement for material goods; this idea extends individual disposable income by including an estimate for non-market production and the provision of public goods. Type 4 is the Dworkinian resource, and type 5 is Rawlsian social primary goods. The difference between Dworkinian resource and Rawlsian social primary goods is clear. Rawlsian social primary goods include income, wealth, liberties, opportunities, and the social basis of self-respect, namely, social resource (Rawls 1971). However, social primary goods do not include a person’s physical and mental traits, namely, internal resource (endowment). Dworkinian resource includes social/internal resource; therefore, Dworkinian resource is, in a sense, closed to capability (Dworkin 2000, ch. 7).

Rawlsian social primary goods are criticized by Sen (1980, 1992, 1999). The critical point is expressed by the following:

Since the conversion of these primary goods and resources into freedom of choice over alternative combinations of functionings and other achievements may vary from person to person, equality holdings of primary goods or of resources can go hand in

hand with serious inequalities in actual freedoms enjoyed by different persons (Sen 1992, p. 81).

Simple resources, which are classified into GNP per capita or individual disposal income, cannot provide an answer to this problem about conversion. However, sophisticated resource, namely, Rawlsian social primary goods or Dworkinian resource, can take account of conversion. Advocates of sophisticated resource adjust the conversion of a resource into an actual achievement by considering social factors. This is shown as the following:

Resourcists can recognize that a person's mental and physical contribution is, to a considerable extent, shaped by social factors: by the locality and family in which one is raised (which greatly influence one's access to nutrition, medical care, physical exercise, play, and educational opportunities during childhood and adolescence) and by the culture and institutional order of one's society (which determines one's opportunities for social and political participation). Resourcists can recognize, therefore, that a person's developed capacities to derive benefit from resources are co-determined by their prior access to resource (Pogge 2010, pp. 27-28).

Thus, Pogge defends Rawlsian social primary goods against Sen's attack. However, Berges (2007) reveals that even sophisticated "resource" cannot solve the problem of conversion. The argument of Berges (2007) is contrary to those of resourcists on two counts. The first is related to whether resource-based distribution can just as effectively accommodate human diversity as capability-based distribution. The second is related to concepts of compensation and stigma about natural disadvantage.

Regarding the first point, a sophisticated resourcist like Pogge defends resource-based distribution on the ground of focusing on access to resources. Referencing concrete examples, Berges' view of this defense is that we need to enter the capabilities discourse for sake of the girl who has access in practice to education in a part of the world where education for women is under-valued. However, there may also be a rebuttal from the viewpoint of the resourcist who believes that resource-based distribution deals sensitively with this case.

Regarding the second point, Pogge (2002, 2008) critically notes that a capability supporter claims that those with natural disadvantages should receive compensation. Pogge attacks compensation that may stigmatize such persons. Berges (2007) counters that Nussbaum's capability, affected by Aristotle's view, is about something different from compensation. According to this conception, Berges mentions that resources would be allocated by calculating, not how much each individual deserves as compensation, but how much is required to bring a group of individuals

above a certain threshold of capabilities. However, the question of whether we can solve the stigma problem may be raised.

How do we think of a suitable solution for the problem of conversion of resource into actual achievement and the stigma problem? First, to examine the conversion problem, we confirm the view of Rawls, in particular, Rawls (2001).

Rawls (2001, p. 169) stresses that primary goods do consider basic capabilities. However, in this statement, there is an important background assumption, namely, people's needs are sufficiently similar (Rawls 2001, p. 170). Certainly, in the real world, cases out of the norm exist. The matter of important here is how to treat people who fall, for a time, below the minimum essentials because of illness and accident. In the Rawlsian theory, special correctives for special needs, such as those of disabled persons, children, and elderly persons, should not be set up in the basic social structure at the constitutional stage, but emerge later in the use of the institution set up, particularly at the legislative stage.

This idea of combining social primary goods and the correspondence of needs plays an important role in the discussions of complementarity between resource and capability. To elaborate this idea, the next section examines the argument of Van Parijs (1995), which is influenced by Rawls' and Dworkin's theories.

### **3. Complementary of basic income and undominated diversity: critical examination**

Van Parijs (1995) discusses basic income, which is distribution based on the concept of resource, from the perspective of normative theory. Basic income means "an income paid by the government to each full member of society (1) even if she is not willing to work, (2) irrespective of her being rich or poor, (3) whoever she lives with, (4) no matter which part of the country she lives in" (Van Parijs 1995, p. 35). Since a basic income obviates the need for collecting private information required to conduct a means test, it decreases administrative costs and avoids stigma resulting from selectivism. However, basic income has been criticized for not requiring any responsibilities, for example, paid employment, care work, or education and training. Moreover, there is the difficult problem of how to raise the large amounts of money required for maintaining a basic income system (e.g., Fitzpatrick 1999; Murakami, forthcoming).

This section does not discuss these problems, but focuses on another problem: people who have serious physical or mental disabilities will not have enough money to live on under a uniform basic income system. Namely, this is the problem of correspondence of needs.

As a solution to this problem, Van Parijs (1995, ch. 3) proposes a scheme in which disabled people are compensated using undominated diversity as the

distribution rule before the uniform basic income is paid out for all.

Undominated diversity is a distribution idea originally proposed by Bruce Ackerman (Ackerman 1980, ch. 4). Ackerman discusses this idea in regard to genetic engineering; his formula is as follows:

Pick any two people out of the population. Compare their genetic endowments. In principle, two—and only two—conclusions are possible. Either A genetically dominates B and B may properly demand compensatory assistance; or A and B stand in a relation of undominated equality, and B gains no relief—no matter how envious of A’s talents he may be (Ackerman 1980, p. 132).

Van Parijs (1995, p. 73) reveals that this idea roughly coincides with the standard distinction between “normal” and “handicapped.”

While Ackerman’s idea of undominated diversity focuses only on genes as internal endowments, Van Parijs defines it as a distribution rule regarding comprehensive endowment, which combines internal endowments that are not transferable, such as genes, physical ability, and appearance, with external endowments that are transferable, such as money and goods.

Van Parijs’s idea of undominated diversity is based on subjective preference over comprehensive endowment and justifies the transfer of external endowments to disabled people without using arbitrary judgment from outside. However, there are some problems with undominated diversity.

In an effort to grapple with these problems, this section attempts to analyze undominated diversity in terms of economic philosophy. To begin with, let us introduce some symbols.  $E_i$  represents the comprehensive endowment of individual  $i$ .  $R_i$  represents preference order over the comprehensive endowment of individual  $i$ , and  $P_i$  represents strict preference order. Undominated diversity is defined as follows:

**Definition 1 Undominated Diversity (Van Parijs 1995, p. 87)**

$$(\forall i)(\forall j)(\exists k)(E_i R_k E_j) \Leftrightarrow \neg((\exists i)(\exists j)(\forall k)(E_j P_k E_i))$$

This suggests that all individuals ( $k$ ) do not strictly prefer the comprehensive endowment of one individual ( $j$ ) to that of another individual ( $i$ ). Redistribution is performed until undominated diversity is satisfied. To make it clear, let us consider dominance when undominated diversity is not satisfied. In this case, the negation of definition 1 is as follows:

**Definition 2 Dominance**

$$(\exists i)(\exists j)(\forall k)(E_j P_k E_i)$$

This suggests that all individuals ( $k$ ) strictly prefer the comprehensive endowment of one individual ( $j$ ) to that of another individual ( $i$ ). Then, the dominated individual ( $i$ ) is a target for compensation. Van Parijs's discussion supposes that disabled people are always dominated individuals. Let us explain this through the following example.

Suppose a society consists of individuals 1, 2, and 3. Individual 1 has a high level of physical ability, but prefers, to his ability, the comprehensive endowment of individual 2, who has excellent intelligence. Conversely, individual 2 prefers the comprehensive endowments of individual 1 to her abilities. Individual 3, who has a physical disability, prefers the comprehensive endowments of both individuals 1 and 2 to his abilities. Furthermore, all individuals least prefer individual 3's endowments. In this case, each individual's preference order profile is as follows:

$$E_2 P_1 E_1 P_1 E_3$$

$$E_1 P_2 E_2 P_2 E_3$$

$$E_2 R_3 E_1 P_3 E_3.$$

Dominated individual 3 is therefore a target for compensation. Individual 3 receives some external endowments and overcomes his handicap by using them. Then, individual 3's preference order changes as follows:

$$E'_2 R_3 E'_3 P_3 E'_1.$$

To satisfy undominated diversity after this change, the compensation for individual 3 stops.

Undominated diversity justifies the transfer of comprehensive endowments to the disabled on the grounds of unanimous subjective preference. Thus, it does not use judgment from an ethical observer or a social planner. However, there are some problems with undominated diversity, as Van Parijs himself admits.

First are the well-known difficulties, that is to say, false preference representation (Gibbard 1973; Satterthwaite 1975), offensive tastes (Rawls 1971, pp.

30-31), expensive tastes (Dworkin 1981a; 1981b), and adaptive preference formations (Elster 1982; Sen 1985a)—all derived from subjective preference. In answer to these problems, Van Parijs requires that the preference be genuine, in other words, people must be fully aware of what life is like when one is crippled and not pretend to prefer being crippled to block redistribution, and available—not restricted—for example, to members of a small sect whose outlook is totally unknown or unintelligible to the rest of society. However, it is thought that these requirements are not sufficient. Who judges and how is that judgment done to justify the genuineness and availability of preference?

The second problem is that a unanimous agreement is required in dominance, which is a condition regarding redistribution. If conditions other than unanimity were accepted, it would generate the cycle exemplified by the so-called “paradox of voting” between partial agreement groups (Van Parijs 1995, p. 80). Consider that each individual’s preference order profile is as follows:

$$E_1 P_1 E_2 P_1 E_3$$

$$E_2 P_2 E_3 P_2 E_1$$

$$E_3 P_3 E_1 P_3 E_2 .$$

It is confirmed that  $E_1$  can defeat  $E_2$  by two votes to one, and  $E_2$  can defeat  $E_3$  by the same margin, so that transitivity requires that  $E_1$  should defeat  $E_3$  in a veto too. However, in fact,  $E_3$  defeats  $E_1$  by two votes to one. The method of majority decisions leads to this cycle.

This study regards unanimous agreement as a strong condition. Should we examine justifications other than unanimity to solve this problem?

The third problem is that comprehensive endowment is based on a dichotomy between internal and external endowments. Is this distinction useful from a practical perspective? Some individual valuations of a handicap that belong to internal endowments would inevitably connect to a person’s external endowments. Perhaps, an informational basis, which unifies internal and external endowments, is more suitable for evaluating the individual situation.

To solve these problems, let us examine undominated diversity in terms of Amartya Sen’s capability theory, which is reflected in public reasoning. Sen admits that undominated diversity is an attractive approach in many ways (Sen 1990, pp. 461-462).



Furthermore, he describes his position as close to that of Van Parijs in regard to the concept of freedom (Sen 1990, footnote 16, p. 468). Both interpret freedom as not only reducing the set of alternatives or choosing the best element in it but also leaving people with room to judge their advantage. Later, Van Parijs formulates the idea of freedom as doing whatever one might want to do (Van Parijs 1995, ch. 1). The important issue is who judges this potential desire and how to judge it. Undominated diversity, which is closely concerned with this concept of freedom, is judged by unanimous subjective preference.

However, as Arrow (1951) has claimed, the distribution problem regarding social welfare is based on an individual valuation that differs from subjective preference. Additionally, Sen emphasizes that valuation is characterized by critical and reflective aspects, and considers that valuation is at the core of capability (Sen 1985a). The reason this study does not call it the “capability approach” but “capability theory” is that capability is publicly reasoned.

This study proposes that functionings can unify internal and external endowments, and can appropriately value the person’s situation better than comprehensive endowment. These individual values might achieve public judgments that are beyond self-interest. Here is a possibility for solving the problem of genuineness of preference.

Next, let us consider the following about the problems of availability of preference and unanimity. In Sen’s proposal, people make social choices identifying functionings (available functionings). It is assumed that social choice, which is based on public reasoning, cannot be reduced to unanimity or majority. This suggests that reasonable minority opinions can possibly be adopted.

From this critical discussion of undominated diversity, the next section shows an alternative distribution rule about needs from the capability theory, referring to Japanese public assistance additional payments.

#### **4. Complementarity of global resources divided and application of capability theory to a needs-based equitable distribution rule**

Capability is more sensitive to people’s differences and various needs than resource. However, evaluation of capability must collect and process a huge amount of relevant information about differences and needs. There is a trade-off between the feasibility of information processing and the sensitivity to various needs. Thus, to design distribution rules for eradicating world poverty, this study tries a combination of resource and capability. The first layered-distribution rule is GRD:

This proposal envisions that states and their governments shall not have full libertarian property rights with respect to the natural resources in their territory, but

can be required to share a small part of the value of any resources they decide to use or sell. This payment they must make is called a dividend because it is based on the idea that the global poor own an inalienable stake in all limited natural resources.

[...]

Proceeds from the GRD are to be used toward ensuring that all human beings can meet their own basic needs with dignity (Pogge, ch. 8, pp. 202-203).

However, this study suggests a version simpler than Pogge's. Because the full meeting of basic needs with dignity requires sensitivity to various needs, including physical and mental diversity, this study assigns the role of first approximation to GRD. This simpler version guarantees feasibility of distribution rules for eradicating world poverty. Furthermore, this study suggests another distribution rule: ACTNBEDR. It provides sensitivity to needs and diversity, and resembles Japanese public assistance additional payments.

Japanese public assistance has some additional payments that respond to special needs in some social categories. The capability theory is more useful for capturing and measuring these special needs than current Japanese public assistance. Let us consider some questions raised by applying the capability theory to Japanese public assistance in terms of needs and agency freedom. [2]

There are several concepts of needs in various fields, and Japanese public assistance supposes a certain concept of needs. First, this study explains the concept of need among the Japanese public. Next, it stipulates needs using the capability theory and the idea of threshold (Nussbaum 2000), and elucidates ACTNBEDR.

Japanese public assistance has two purposes; one is the guarantee of a minimum standard of living, and another is the promotion of self-reliance. The former is directly relevant to the concept of needs. Depending on the level of needs, the government provides public assistance for those who have trouble making a living despite utilizing all their assets, ability, and family support. The standard amount for Japanese public assistance, based on a careful study of various circumstances such as the recipients' age, sex, household composition, inhabited area, and eight types of public assistance (livelihood assistance, housing assistance, education assistance, medical assistance, long-term care assistance, maternity assistance, occupational assistance, and funeral assistance), should be sufficient to ensure the minimum standard of living but should not exceed it (Figures 1 and 2):

Figure 1 [3]

## Amount of Japanese public assistance Including various additional payments

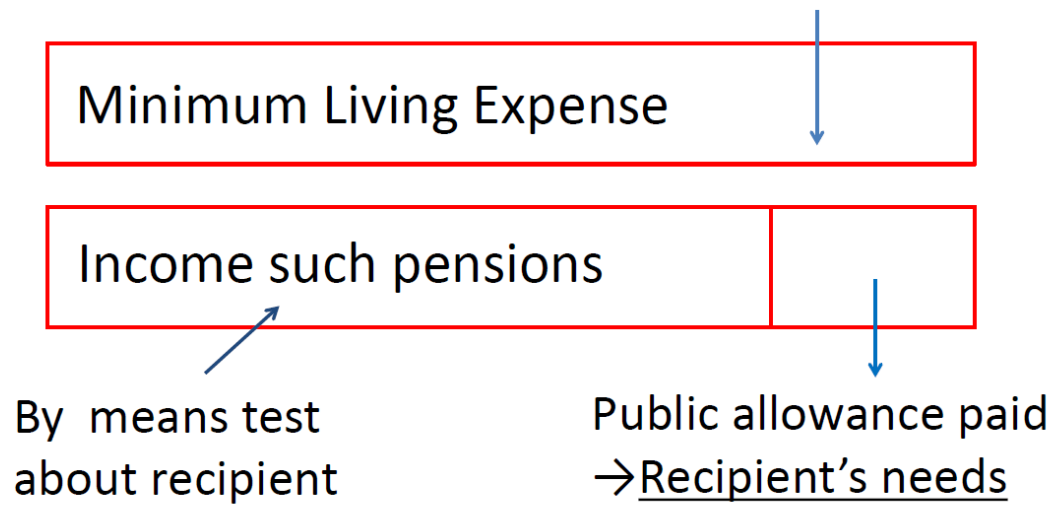
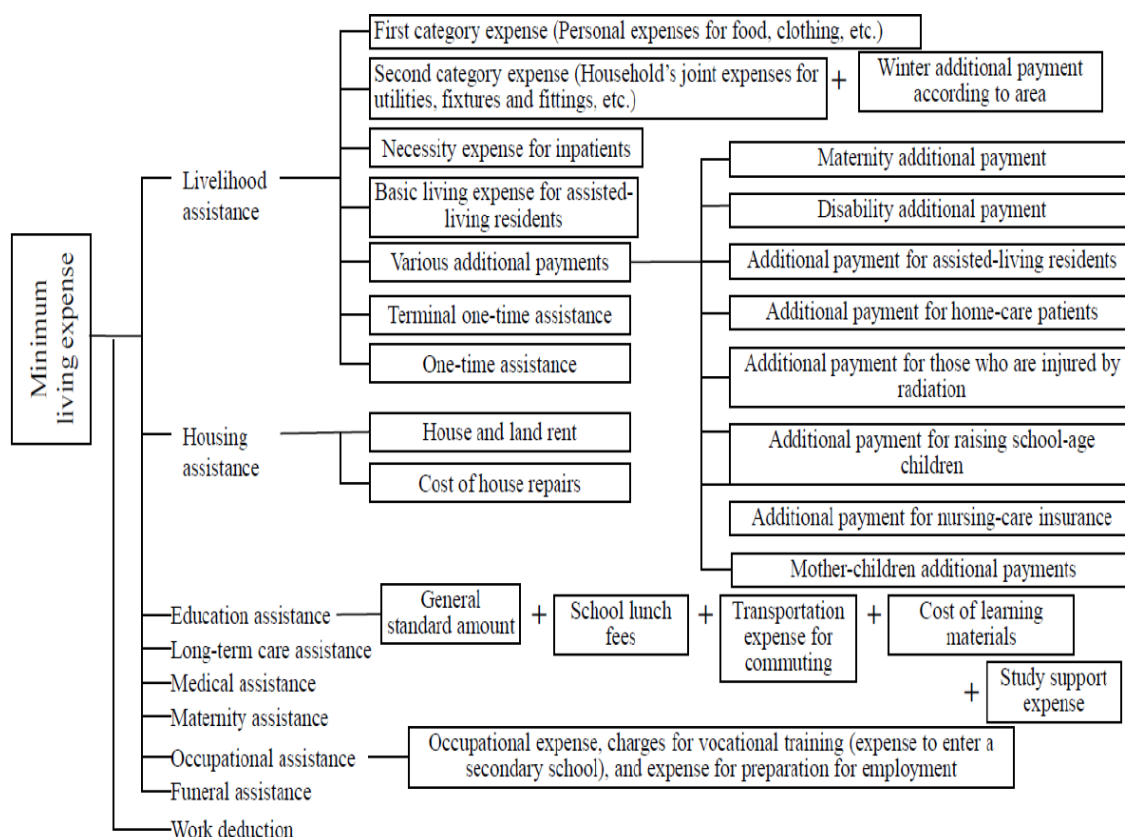


Figure 2 [4]



The additional payments come from livelihood assistance for the minimum standard of living; these are not excessive, but requisite elements.

In this study, needs are defined as the insufficiency of the individual's capability in a social category to the reference capability. The reference capability indicates the threshold over which a person is not enabled to live in a truly human way at this level of capability (Nussbaum 2000). Moreover, this definition of needs relies on the conceptual formulation by Gotoh (2001). In Japanese public assistance, this reference capability corresponds to the minimum standard of living, which is judged by the level of consumption and finally decided on by the Ministry of Health, Labour and Welfare. As opposed to these standards, the reference capability constitutes an evaluation system based on agency freedom.

The needs advocated by this study are based on capability. The person concerned about needs exercises agency freedom and participates in an argument to discuss needs. The argument to discuss needs or capability is interpreted as an important role of public reasoning, and this participation by the recipient provides the possibility of solving the stigma problem.

Let us give an explanation of agency freedom and public reasoning before discussing relations of needs. In a preceding study on the practice of capability (Sen

1999, 2009), the importance of public reasoning is revealed. Referring to Sen (1992), and Crocker and Robeyns (2010), this study tries to characterize agency freedom by public reasoning:

A person's "agency freedom" refers to what the person is free to do and achieve in pursuit of whatever goals or values he or she regards as important. A person's agency aspect cannot be understood without taking note of his or her aims, objectives, allegiances, obligations, and—in a broad sense—the person's conception of the good (Sen 1985a, p. 203).

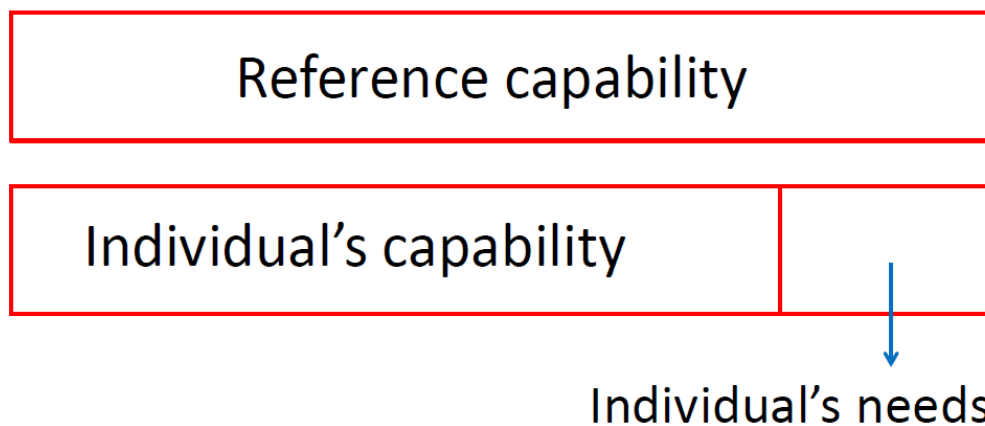
A person's goals and values are closely related to his needs. However, personal needs have aspects not limited only to individual well-being because personal needs depend on the individual's social category and also have common parts.

The public assistance additional payments discussed in this study respond to special needs in a certain social category. The evaluation of such needs is the working of public reasoning. Risks that reveal preferences to be adaptive and choice to be inhibited are inherent. Therefore, the security of preference and choice is important, and this exercise is related to public reasoning. In addition, some people require social support in their assessment of needs. Such social support is not to inhibit agency freedom, but to complement it.

The main conclusion of this argument is as follows. The government should not change needs based on a standard level of consumption. Figure 3 shows ACTNBEDR:

Figure 3

## ACTNBEDR



ACTNBEDR is evaluated by exercise of agency freedom.

As shown here, the merit of capability is a powerful theory. However, the capability theory has the disadvantage of computational complexity in information processing of the evaluation of needs. In particular, when we consider the needs of the global poor through the capability theory, this huge computational complexity hinders the design of distribution rule in global justice.

To solve this problem, this paper suggests the complementarity of two layered-distribution rules. By designing simple GRD, whose domain consists of resource as the first layered-distribution rule, the number of concerned persons (those targeted by the ACTNBEDR that is the second layered-distribution rule) decreases, and the domain of ACTNBEDR contracts. Thus, the computational complexity in information processing of the evaluation of needs from the capability theory is reduced.

### 5. Conclusions

At the risk of oversimplification, Rawls' and Pogge's ideas are theories of justice, whereas Sen's idea is a theory against injustice. Sen (2009) reasons to remove injustice, and GRD can remove sufficiently *clear* injustice. Certainly, in the real world, various *unclear* injustices exist. Capability is a heuristic tool and an effective solution for these *unclear* injustices.

For realizing global justice, the complementarity of GRD and ACTNBEDR comprise just one small step. To overcome the trade-off of feasibility and sensitivity regarding needs, we must reflect on theories of global justice and take necessary action.

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### Note

[1] Pogge (2002) is an early version of Pogge (2010).

[2] “Agency freedom is freedom to achieve whatever the person, as a responsible agent, decides he or she should achieve” (Sen 1985b, p. 204). The role of this concept in this study is explained later.

[3] Figure 1 is based on “Outline of the Public Assistance System” on the website of the Public Assistance Division, Social Welfare and War Victims’ Relief Bureau, Ministry of Health, Labour and Welfare ([http://www.mhlw.go.jp/english/topics/social\\_welfare/dl/outline\\_of\\_the\\_public\\_assistance\\_system\\_20101004.pdf](http://www.mhlw.go.jp/english/topics/social_welfare/dl/outline_of_the_public_assistance_system_20101004.pdf))

[4] Figure 2 is the “Structure of minimum living expense” from the website of the Public Assistance Division, Social Welfare and War Victims’ Relief Bureau, Ministry of Health, Labour and Welfare ([http://www.mhlw.go.jp/english/topics/social\\_welfare/dl/outline\\_of\\_the\\_public\\_assistance\\_system\\_20101004.pdf](http://www.mhlw.go.jp/english/topics/social_welfare/dl/outline_of_the_public_assistance_system_20101004.pdf)).

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