

Justice in a Pandemic: An Overview of Revised Primary Goods and Policy

Tradeoffs

by

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Thesis Abstract

Simplifying the complex reality, this study addresses two questions. First, if the institution is ever responsible for ensuring citizens' survival in a pandemic, how does it handle the protection of survival with conflicting primary goods—basic liberties and economic welfare? Second, when the institution is responsible for improving public health outcomes, how does it weigh public health outcomes against conflicting social interests—mobility and the economy?

In Chapter I, we propose a hypothetical primary good—survival insurance by arguing that the pandemic pushes the social contract to a logical extreme. We categorize survival insurance under Rawls's Second Principle and argue that survival insurance contains a worth of liberty that cannot be controlled by the institution through other primary goods. We argue that it is justified for survival insurance to sacrifice basic rights only if it prevents a much greater infringement of basic rights. It is justified for survival insurance to sacrifice income in the pandemic because survival insurance improves QALY—a measure of opportunity to live. Due to the serial order of Fair Equal Opportunity under Rawls's Second Principle, survival insurance has a priority ahead of income and wealth.

In Chapter II, we apply survival insurance to real-life policy tradeoffs. Using indifference curves, we show that survival insurance is not Pareto-efficient because equality compromises total health outcomes. The Difference Principle requires that the institution makes survival insurance public and non-exclusive so that it treats people with lower expected QALYs as a priority. We review a study on the cost-effectiveness of intervention policies and discover that persistent lockdowns become increasingly cost-ineffective, and we realize that survival insurance faces the same problem. Lastly, we discuss the tradeoff between mobility and public health outcome. While mobility is a social interest, the social preference that weighs mobility over public health is not necessarily a rational social preference. Rational social preferences are the ground of survival insurance and intervention policies; hence the tradeoffs indicate the need to recognize a collective rational preference instead of grasping discrete, stated preferences.

Finally, Chapter III raises criticisms of this study. We realize our use of QALY neglects its ethical controversy. To offer survival insurance, against Rawls's view, the Difference Principle has to apply across borders. We also avoid discussing policies under a general conception, because our discussed rights and equalities will not apply without compatible resources. The general conception requires a different review.

Introduction

The 2020 Coronavirus Outbreak posed a challenge to institutions and policymakers. With cases spread over the world, nations took distinctive approaches in combating COVID. While some rigidly imposed lockdowns for several months, others took soft measures and allowed gatherings and movements. The difficulty of pandemic policymaking raises questions to many aspects we ignored in the social interests, preferences, and primary goods. While COVID regulations try to preserve as many lives as possible, they are imposed not to achieve the greatest good for the greatest number (i.e. utilitarianism), but to mitigate the effect of COVID on every individual and ensure equality with an efficient distribution of scarce resources.

When the pandemic hits, it comes to our knowledge that survival through a virus has always been a basic right, and it hurts when we realize that survival is detached from our regular discussion of institutional responsibility. In this project, we propose that the protection of survival has always been illuminating in the social contract under institutional control. We will assess its relationship with known primary goods as well as its application in policy tradeoffs in light of Rawls's *A Theory of Justice*.

Chapter I. Proposing Survival Insurance

COVID-19—An Exemption from Normality

To begin, we want to explain why we cannot take Rawls's established principles for granted when we access policymaking issues in COVID-19. Rawls admits the limitation of his theory. The "limitation on our discussion is that for the most part I examine the principles of justice that would regulate a well-ordered society" (Rawls 8)", and his purpose is to "ask what a perfectly just society would be like" (Rawls 8). Hence, his construction carries a purpose to

reach its maximum ideal, instead of battling with issues that impede its evolution. Rawls primarily considers strict compliance instead of partial compliance, which focuses on the principles that deal with “questions of compensatory justice and of weighing one form of institutional injustice against another” (Rawls 8). Hence, our study takes on a completely different path than Rawls’s, though ours nonetheless builds on Rawls’s basis of a perfectly just society¹. While Rawls looks for the principles that serve a well-ordered society and make it perfectly just, we look for principles that make an ill-ordered society as just as possible.

Because Rawls portrays a perfectly ideal society, his construction in *A Theory of Justice* is based on the assumption of normality—his definition of health, primary goods, and serial order of the First and Second Principle are determined by assuming that society is well-ordered. The situation of COVID does not serve his assumption. This is not to say that COVID exemplifies an abnormality, but it is an exemption from his construction. The difference between Rawls’s well-ordered society and society in COVID is mainly scarcity. In Rawls’s discussion of the Fair Equal Opportunity and the Difference Principle, society is under **moderate scarcity**. “Behind the veil of ignorance, parties know [t]hat society is under conditions of moderate scarcity: there is enough to go around, but not enough for everyone to get what they want” (Wenar). Moderate scarcity entails that society can restore itself. However, society in COVID experiences increasing scarcity such that it cannot replenish itself without proper interference. The evolution of such scarcity does not happen in a blink—it develops and exacerbates till it becomes unbearable. It will be better for us to understand if we divide the process in stages.

¹ “The reason for beginning with ideal theory is that it provides, I believe, the only basis for the systematic grasp of these more pressing problems” (Rawls 9).

Two Stages of Disease Development

The evolution of the disease is complicated. Based on how it affects the hospital system, we may be able to separate the situation of COVID into two abstract stages of development: Stage I refers to the situation when there is moderate scarcity, tight human resources, sufficient hospital capacity, followed by a manageable social order; Stage II refers to the case when there is extreme scarcity in both physical supplies and human resources. While Stage I gradually deteriorates to become Stage II, a breakpoint that separates the two is when the hospital system gets overwhelmed. In distinguishing Stage I from Stage II, we focus mainly on the capacity of healthcare and hospitals. The implication of the two stages is the following: In Stage I, society is able to maintain a high level of equality, in particular, the equal chance of survival. Hospitals take in patients regardless of their conditions and spend more resources on the ones in danger. In Stage II, extreme scarcity occurs, and health justice becomes difficult to maintain, e.g. hospitals might abandon the elderly patients. Stage II does not automatically equalize Rawls's general conception, which we will discuss later.

Consider two evils: the evil of society deteriorating to Stage II, where the most vulnerable group is exempted from the hospital, is what I call the *Darwinist Evil*. I am using "Darwinist" to present a scenario with a lack of civilization and an exhibition of Darwinism, in which the strongest survive and the weakest are left out. On the other hand, the evil of using strong interference policies to stop Stage II from coming is what I call the *Necessary Evil*. While Necessary Evil is required to prevent Darwinist Evil, they both cause severe side effects to society. Procedural injustice often results from an overdose of Necessary Evil, pressuring society and shaking governance. Darwinist Evil creates an inequality of survival, posing a crucial ethical

question: if the chance to survive is unequal, do the other equalities in our daily concern even exist?

When we compare the two stages and examine the level of justice they foster, Stage I is close to normality. Stage II deprives society of choices: it is not anyone's will to abandon patients who need more sources. While Stage II does not automatically equalize the general conception, Stage II has a tendency towards the general conception. Rawls describes the general conception as a situation in which society does not offer the number of resources that are compatible with ensuring equalities, and there must be a tradeoff between basic liberties and total welfare. Hence, the operation of the hospital system in Stage II is more likely to adopt a utilitarian calculation because it does not have enough sources to maintain justice.

When speaking of the pandemic, the theory people come up with most often is utilitarianism. However, in desperate attempts to prevent the consequences of COVID, society is also protecting itself against the inhumane calculation of life worth: when hospitals reach their capacity, they will stop receiving patients in danger and turn to save the vigorous ones. In a sense, patients who are most likely to live and require fewer medical supplies are considered more valuable; the vigorous lives that need fewer medicines are worth more than the lives prone to death. Utilitarianism is the very theory we struggle to prevent in a crisis as long as we have enough sources to ensure equality.

It is hard to imagine that interference policies can be more devastating than the effects of Stage II, but it is possible that poor policymaking stresses out society prior to ending the disease. We want to find out the principles that limit, support, and justify Necessary Evil yet establish conditions to protect procedural justice. To begin, we shall modify Rawls's list of primary goods and highlight an important social interest in a national crisis.

Expanding Primary Goods

Based on his assumption of normality, Rawls's examples of primary goods are limited such that they ignore a variety of pursuits and narrow down institutional obligations. Primary goods are goods that government should distribute: "For simplicity, assume that the chief primary goods at the disposition of society are rights, liberties, and opportunities, and income and wealth." On the other hand, "[o]ther primary goods such as health and vigor, intelligence and imagination, are natural goods; although their possession is influenced by the basic structure, they are not so directly under its control." (Rawls 54) Based on Rawls's reasoning, the government cannot distribute health. While they can distribute medical necessities, medicines are too narrow in terms of resources. However, this interpretation is built on Rawls's assumption of normality. Normally, the interpretation of health is **private**. A person's health is independent of society's impact and does not go beyond an individual's life choices. In COVID, the definition of health is completely different: it becomes **a public issue**, a result of social activities. A person's health becomes dependent on other people's behaviors and conditions, which can be regulated by society. Thus, health in the pandemic is related to the basic structure.

To be identified as a primary good, one must satisfy three conditions: (1) It is a good such that any rational person would want more than less. (2) It is a necessary means that allows an individual to achieve the final aims of life; therefore, (3) individuals desire a fair opportunity to achieve it in a just society. (4) It is a social good in view of its connection with the basic structure. For example, it can be defined by the rules of institutions or regulated by them.

Criticisms arise in response to Rawls's portrayal of primary goods. As Rawls discusses "[p]lurality of principles as plurality of individual interests" (Rawls 41), a plurality of interests

contributes to the plurality of primary goods. Rawls's primary goods are not a perfect, fixed set of possibilities. The Nagel-Schwartz objection to Rawls's primary goods states "that the full list of goods that is genuinely primary according to Rawls's stipulated definition is an unfair or biased measure of people's resource shares for purposes of a theory of distributive justice" (Arneson 430). In Arneson's example supporting this objection, a good that satisfies three people's partial needs may only fulfill one's aim. It nevertheless counts as a primary good. Hence, it is indicated that Rawls's examples of primary goods are not a sufficient list. They are only part of an individual's final aim, and if some good meets their qualities, the list is open to be expanded.

Building on the Nagel-Schwartz objection to Rawls, we may incorporate a new primary good into Rawls's set, so long as it fits the requirements. We have argued that health in the pandemic is public and connected to the basic structure, but it remains as a natural good. While we cannot use it as a primary good in Rawls's list, the primary good we add in substitution of health is **survival insurance**—insurance against the disease (COVID-19) through access to medical resources, founded by active government support. To understand survival insurance in our construction, we must tie it to the quality-adjusted life year² (QALY), a measure of disease burden. Many studies have used QALY to calculate the effect of policies on public health. In the discussion of survival insurance, QALY is a measure of opportunity: the opportunity to live and have access to many other goods, such as liberty and wealth. Recall that the scarcity of medical and human resources distinguishes Stage II from I, we wish to use this primary good to regulate

² A measure of disease burden that includes both the quality and the quantity of life lived. One QALY equates to one year in perfect health.

scarce resources. Although many policy measures such as quarantine also improve the chance of survival, to simplify the argument, we will not incorporate them into this primary good. Rather, we will discuss these measures in Chapter II, when we discuss how justice principles apply to intervention policies. Hence, we describe survival insurance as an entitlement to some types of social insurance such that the expectation of QALY is regulated by distributing targeted medical sources and treatments.

The addition of this primary good is justified. It satisfies primary good's conditions (1) (2), and (3) as a good that any rational person would want more than less. It enables individuals to reach final aims of life, and individuals desire a fair opportunity to achieve it. Condition (4) evidently requires more justification. Responding to Rawls's view that health is a natural good not directly under control of the basic structure, survival insurance works as a perfect substitute of health: First, survival insurance is ensured by government and tied to the basic structure. Second, while there is no guarantee an equal opportunity to survive, there can be an equal access to an "insurance." The question is: what composes insurance and how do we enforce it? Many countries' governments have purchased medicines and transformed them into public goods so that they can guarantee a fair opportunity to get cured. This is not the only way to do it. While giving grants and imposing lockdowns also enhance survival (and we will discuss these strategies in Chapter 2), to simplify the argument, we want to narrow down the definition of survival insurance to *only* the distribution of medical sources.

Not everyone cares for survival insurance. Many treasure the freedom of movement or economic outcomes and are willing to exchange survival insurance for other benefits. While it is reasonable to have disagreements upon values, they do not disprove survival insurance as a primary good. "A rational person would always prefer to have less rather than more of primary

goods along with the assurance that her ultimate aims will be fulfilled to a greater degree” (Arneson 434), so the perception of value is open to challenge on an individual basis. Rawls fails to provide a lexical order for primary goods, though he proposes to weigh these goods. This brings us to the next challenge: Rawls assumes that the two principles of justice³ are serially ordered, and he proposes that “[t]he fundamental liberties are always equal, and there is fair equality of opportunity; one does not need to balance these liberties and rights against other values” (Rawls 93). On the other hand, “[t]he primary social goods that vary in their distribution are the powers and prerogatives of authority, and income and wealth” (Rawls 93). Hence, we want to categorize survival insurance under Rawls’s principles and figure out its relationships with other primary goods.

Lexical Order

The questions are: where do we settle survival insurance in Rawls’s theory? How do we determine the importance of this primary good when we incorporate it in the context of First and Second Principle? Consequently, how do we weigh this primary good when it conflicts with basic rights and liberties, and how do we weigh it against income and wealth? Parallel to these questions, the tradeoff between liberty and public health as well as the tradeoff between the economy and public health are two unresolved conflicts in pandemic policymaking. How we

³ First Principle guarantees equal basic liberties. Second Principle assures (1) fair and equal opportunity to offices and positions; (2) social and economic inequalities are just only if they result in compensating benefits for everyone, and in particular for the least advantaged members of society.

decide these tradeoffs will be discussed in Chapter II when we evaluate intervention policies.

Unlike survival insurance, intervention policies help society return to a normal state, but they do not promote health justice.

We mentioned that Rawls's theory is established in the condition that society functions normally, but it cannot serve society with severe scarcity. Rawls distinguishes between the general conception and the special conception. Societies that can provide all social classes with the material existence compatible with equal liberties adopt the special conception. Because society is able to maintain justice with adequate resources, the Difference Principle, Fair Equal Opportunity, and Lexical Order apply to weigh when two primary goods are in conflict. In our study, we perceive that society is deviating from normality, but for the most part, we assume that society is under the special conception.

A dilemma is that survival insurance is a mixture of Rawls's First and Second Principle, but Rawls does not treat any primary good as a bridge between two principles. In his argument, Rawls decides that liberties and rights are never needed to be balanced against other values. The problem is, survival insurance contains QALY, which implies basic rights and liberties. However, survival insurance is by definition like income and wealth in that 1) it is regulated instead of defined by the rules of major institutions⁴, and 2) a person can have more expectations of survival than another. Like health, insurance against the disease can be affected by age, preconditions, career, and biological factors, so the Difference Principle will apply. It is more reasonable to classify survival insurance under the Second Principle. If so, Rawls's serial order

⁴ “[L]iberties and powers are defined by the rules of major institutions and the distribution of income and wealth is regulated by them” (Rawls 92).

indicates that the infringements of basic equal liberties protected by First Principle cannot be justified by greater social advantages—survival insurance (under Second Principle) must make compromises to basic rights (under First Principle).

Despite the serial order, suppose that in execution, policymakers find that they must trade survival insurance with some basic rights, then we suggest that there **can** be a justifiable tradeoff as long as the tradeoff aims to prevent **a greater, more general sacrifice of basic rights**. As mentioned, the general tradeoff happens in Stage II when hospitals only take in patients who are most likely to survive. We will let Necessary Evil bridge over First Principle and survival insurance. When survival insurance violates basic rights, it creates Necessary Evil, which is justified through the prevention of Darwinist Evil. Maximizing survival insurance does not by itself justify the infringements of basic rights.

Now the question is: can we trade survival insurance with other goods under the Second Principle, such as income? This leads to the policymaking dilemma of sacrificing the economy for public health. In principle, survival insurance cannot make compromises to income because there is a lexical order under the Second Principle, which is that Equal Opportunity comes before the Difference Principle. Because survival insurance guarantees access to physical sources related to health, we can think of survival insurance as an opportunity and treat QALY as a measure of such an opportunity. QALY measures opportunities not only to health but also to a variety of goods related to health, such as the ability to exercise, access to happiness, etc. Health is an opportunity to enjoy life and a public good enhanced by others, hence we would desire a fair equal opportunity to achieve survival insurance. So, fair and equal access to this insurance is the priority under the Second Principle. Because equal opportunity goes before the Difference Principle, no economic improvements can sacrifice equal access. The equal opportunity to

achieve insurance is supposed to raise the least well-off representative group by guaranteeing access. It goes before the Difference Principle, in which some may enjoy more coverages than others. Therefore, our suggestion is to guarantee fair equal opportunity of survival in the pandemic, and we want to achieve that by allowing fair equal access to survival insurance, which can be realized through some forms of collective projects. In the case of coronavirus, it can be targeted insurance covering coronavirus treatment with fair and equal access to everyone.

Our attempt to guarantee fair equal access responds to the fact that a pandemic does not affect people equally—it leads to an inequality of opportunity. The outbreak leads to an accumulation of wealth for the wealthiest, which is not a benefit that improves the well-being of the lower-positioned group. It also causes a priority of receiving superior medical treatments for the wealthiest and once again with no improvements to the least well-off. We can borrow the concept of QALY to explain how we arrange insurance. Because higher QALY leads to more resources, we can treat QALY the same way we treat other goods under the Second Principle, such as income. According to the Difference Principle, one can have more QALYs than another, so long as the ones with higher QALY compensate the ones with lower QALY. What keeps the well-off healthy must keep the worse-off healthy as well. In application, this can be any form of capital or medical supply circulation within the insurance system that ensures coverage to unhealthy people first. Though we are not able to guarantee a minimum level of coverage, we can guarantee to raise the least well-off from their current position.

It is noteworthy that Fair Equal Opportunity and Difference Principle will not make up a pareto-efficient arrangement, because pareto-efficiency, though creating the largest overall benefit, hardly provides justice. We have to keep in mind that the purpose of pandemic policies is to mitigate the negative effect on each individual instead of maximizing the utility for all. In

any case, maximizing utility comes with sacrifices of underrepresented social groups, and we try to offer a fair opportunity for people who live in the pandemic. As Rawls says: “All social values—liberty and opportunity, income and wealth, and the social bases of self-respect—are to be distributed equally unless an unequal distribution of any, or all, of these values is to everyone’s advantage” (Rawls 54). Thus, survival insurance shall be distributed equally unless an unequal distribution benefits anyone. Under such a premise, we must set a minimum level of insurance for everyone and allow for the maximum coverage—the exact same fairness we protect in distributing income and welfare.

We also want to avoid the average utility principle in arranging this primary good. Since lowering the well-being of the least well-off group can also improve the average utility, it is neither just nor equal. In Rawls’s principle, reasonable health expectation should not be reached by disadvantages of the least well-off individuals—it is only justified by raising the least well-off above sufficiency. Even the least well-off group would prefer the difference principle to an average utility schema, because their well-being will not be taken to maximize the good for all, and they will be compensated by the improvement of the well-off group. The average utility is a risky principle. It is built on the assumption that people make an accurate prediction of their chances and “presupposes a real and equal acceptance of risk by all members of society” (Rawls 167). However, one cannot accurately calculate risks, and even if one is able to do so, people are not willing to take the same risk of being unfortunate (Rawls 167). In drafting the social contract, will people choose the average utility principle at the risk of its subsequently happening that they become pulmonologists with few surgical masks or residents at a highly infectious community? The answer is likely to be no.

We have suggested survival insurance as a necessary primary good and established the

principles that regulate it. We still owe the answers to a few questions: If Rawls has established equal liberty, why is it still necessary to incorporate survival insurance into existing primary goods? Aside from the reason that it satisfies all conditions of a primary good, why does society need it? Do we only need it in society during the pandemic, or is it always in need but has been ignored?

Worth of Liberty

We have argued that health is not regulated by the basic structure, so survival insurance has to substitute it. But to answer why Rawls's basic rights are insufficient, it is crucial to recognize Rawls's distinction between liberty and the worth of liberty. The worth of liberty is different from the mere fact that liberty exists. While Rawls suggests that all liberties must be the same for everyone, the worth of liberty varies among individuals, depending on authority and wealth. Wealthy people may hold more worth of liberty than others, but they possess the same liberty just like everyone else.

The state has the power and obligation to enforce the worth of liberty. It is impossible to compensate for a less than equal liberty (Rawls 204), but it is possible to compensate for the lesser worth of freedom (Rawls 205). Thus, "the basic structure is to be arranged to maximize the worth to the least advantaged of the complete scheme of equal liberty shared by all. This defines the end of social justice" (Rawls 205). We can simplify Rawls's reasoning by stating that a good under the Second Principle (e.g. income) affects the worth of a good under the First Principle (e.g. liberty). That being said, in order to "maximize the worth to the least advantaged" or to alter the worth of liberty, the basic structure must act upon the goods under Second Principle.

In the pandemic, the worth of liberty would be the chance of survival, and authority and

wealth still directly affect survival. What is truly problematic is that the basic structure cannot directly “maximize the worth to the least advantaged” by acting upon authority and wealth. Wealth may have a direct impact on the chance to survive, but the acts of the basic structure upon wealth do not immediately raise the chance of survival for the least advantaged. It is inefficient, costly, and perhaps too late to raise unwealthy people’s survival chance through taxation, for instance. Thus, society requires an additional good under the Second Principle, which can be regulated by the basic structure to directly alter the worth of liberty. By introducing survival insurance as a primary good as such, we facilitate the process for the basic structure to achieve the end of social justice.

Social Contract

The greatest challenge for adding a primary good involves the social contract. Is the social contract requiring us to bring in new principles, or are we adding new principles into the social contract? Moreover, do institutional failures occur because the social contract is flawed, or because we fail to meet the social contract?

We mentioned that Rawls’s assumption of normality entails that society can restore itself, which implies a moderate scarcity. When a shortage of resources occurs, society is capable of renewing and restoring its original condition. The pandemic induces increasing scarcity; hence, it is exempted from the normal condition. We do not expect the list of primary goods in normality to be the same objects of consensus, and we propose survival insurance as a solution to public dissatisfaction. However, even under Rawls’s normal condition, there is no guarantee for a satisfactory life, hence public dissatisfaction does not indicate a change in the social contract.

Rather, the expansion of primary goods indicates that many aspects of the social contract

have been hidden in the dark. Our realization that society has an obligation to preserve health indicates the flexibility of the social contract. If we push society to logical extremes, we expose ourselves to a variety of unrevealed primary goods. People in the pandemic would ask society for insurance to survive, what about people in a famine? Would they ask society for insurance of food stamps? The fact we ignored many goods implied by social contract rings an alarm for policymakers: Just because a good does not show up in normality does not mean that society has fulfilled offering benefits.

Pandemic, as well as many natural disasters, take place overwhelmingly. However, disease preparation is embedded in the social contract just like the preparation for any other natural disasters: We may not predict when and how often an outbreak happens, but if we consider the nature of the disease, we assure that it is impossible for an outbreak to not happen. Therefore, it is inevitable. It is part of the social contract that society prepares for inevitable situations, therefore, the institutional failure in fighting COVID is not a failure of the social contract, but a failure in executing the social contract. We define insurance as a preparation for a crisis that may or may not happen. Pre-pandemic medical storage, national hurricane preparation, etc. have always been a part of the execution of the social contract. When a crisis happens, hidden primary goods reveal themselves, and the institution is obliged to protect them. There are only two reasons why society fails to secure primary goods: it is either that there is an exceptional outcome which no one ever anticipates in history, or there is a failure of insurance itself. The outbreak of a pandemic is not something that never happened before, hence the policy failure in fighting COVID exemplifies the latter as a failure of inconsiderate social insurance. In short, the execution of the social contract in offering insurance to secure unrevealed primary goods has been terribly wrong in COVID interventions. How to execute successful survival

insurance and intervention policies is our focus in the next chapter.

Chapter II. Intervention Policies and Tradeoffs

We have proposed adding survival insurance as a primary good and argued for its importance in the social contract. We have not considered the regulation of this primary good and the tradeoffs we might have in regulating it. The greatest challenge in the application is that we suggest survival insurance to ensure justice in an unjust society, but insurance itself cannot help restoring society to the norm. If applied inappropriately, it might be so costly that it exhausts the healthcare system. Hence, this chapter is devoted to discussing how to maintain health justice through survival insurance while balancing it with other factors.

With survival insurance being concerned, policymakers would consider three tradeoffs: 1. The tradeoff between the equality of survival insurance and the total health outcome, 2. The tradeoff between the economy and the total health outcome, 3. The tradeoff between mobility and the total health outcome. In discussing the tradeoffs, we will consider the practice of survival insurance and extend the discussion to broader issues. How we regulate survival insurance depends on two principles: the principle of efficiency and the principle of justice. We will extend the argument to analyze the regulation of competing social interests.

Equality versus Public Health Outcome

Before examining the tradeoff between liberty and QALY, or the tradeoff between public health and the economy, let us consider how an institution offers equal health benefits through survival insurance while maximizing the public health outcome. The basic structure sets two standards. The first standard, the standard of efficiency, requires us to maximize the public

health outcome. The second standard is the standard of justice, which attempts to even out the advantages of individual health. In Chapter I, we have argued that we can only grant equal access to survival insurance, but we must allow differences in the coverage to raise the minimum. Our previous argument is that health, like talents, is not a born-to-be-equal factor and that it is better to use the Difference Principle than using the average utility. The practical question is: what happens if the purpose of maximizing total health outcomes conflicts with maintaining equal health benefits?

While QALY measures the achievement of survival insurance, the sum of individual QALYs refers to the public health outcome or total welfare in terms of health. Rawls uses indifference curves to present the tradeoff between equality and total welfare. Since survival insurance falls under the Second Principle, we can narrow down Rawls's intuition and apply that to the execution of survival insurance. The same figures can now be borrowed to portray the tradeoff between equal health benefits (ensured by survival insurance) and the total health outcome. The purpose of using these graphs to present two competing principles is to show that as some extent of substitutes, they need not be reduced to one. While this type of visualization does not give any account of judgments, it intuitively presents the combinations of two principles that contain the combination believed to be the "best" (Barry, 5). While equality and total welfare cannot be precisely quantified, they present their weights in policymaking intuitively through these graphs.

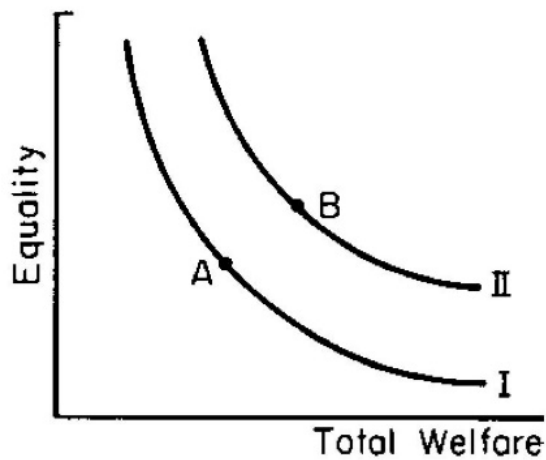


FIGURE 1

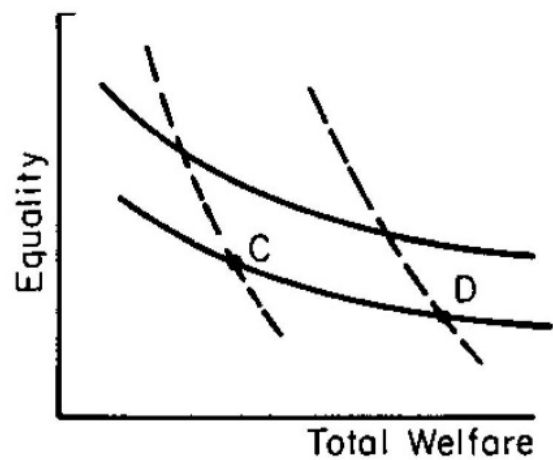


FIGURE 2

(Rawls, 37)

Based on Rawls's interpretation, the graphs can be read in the following way. The slope of the curve indicates the relative weights of the combinations, which include equal health benefits and the total health outcome. Moving along either curve in Figure 1, point B is preferred to point A because it consists of greater equality and a greater health outcome. In Figure 2, as Rawls suggests, the solid lines represent a person's judgments which give more weight to health benefits' equality, and the dashed lines represent another person's judgment which inclines towards total health outcome.

While intuitionists believe that there are no constructive answers to assigning weight to competing principles, and one principle might never be more valuable than another, it is possible that two situations will shift focus from one combination of principles to another. Back to our discussion of the disease in two stages, in Stage I, the indifference curves for policymakers are more likely to mimic the solid lines. In Stage II (the stage with extreme scarcity), the indifference curves will resemble more to the dashed lines because Stage II is inclined towards the general conception. Under the general conception, there are not enough resources compatible

for ensuring equality, hence there will be a tradeoff between equality and welfare. Thus, the social preference will be more inclined towards total welfare in Stage II, which makes it difficult for survival insurance to promote equality—in fact, society may not even be capable of offering survival insurance in Stage II if scarcity becomes too extreme.

We have argued that protecting health protects opportunity (QALY), but it does not imply that inequalities in health or inequalities in opportunity are unjust. For instance, it would not be unjust for an elderly with inferior health to enjoy more benefits than a vigorous young person. Projected to the public health environment, natural inequality of health conditions (the likelihood to die from the disease if infected) creates room for the Different Principle: unequal distribution of health entails that there can be inequality as long as the most well-off compensates the least well-off. This kind of inequality has been justified in Rawls's Difference Principle, which we may apply under a public health condition.

There are three ways for the Difference Principle to work: First, people with the most well-off economic status can afford more, greater, and earlier health benefits. To raise the least-advantaged, the healthcare system would transfer their spending to help the ones who cannot afford many benefits. Second, people with the best natural-born health conditions (a higher QALY) maintain their positions in the healthcare system. Based on the fact that nothing changes to their status whatsoever, some of their unused benefits are transferred to the unhealthy group and raise their QALYs. In this case, there is no harm to the most well-off, but the least well-off benefits as well. There is a third case in the pandemic that involves risks: medical workers, mailmen, policemen bear relatively high risks of infection. In this case, people with higher infection risks are the least well-off, and people with lower infection risks are the most well-off. Those with a higher risk of losing QALYs are compensated with the benefits of those who bear a

lower risk, and by staying healthy, people whose profession bears a high risk (especially medical workers) in turn benefit the most well-off by simply staying healthy and keeping hospitals in business. Thus, it is just for medical workers to receive priority treatments under pressing scarcity.

The challenge is, we cannot consider the differences in economic status, health conditions, and risks of exposure at the same time. For our concern of QALY, the only two factors we can consider are health conditions—the likelihood to die from the disease and the risks of exposure—the likelihood to catch the virus. If the economic status is not included in the Difference Principle for survival insurance, then it indicates that there cannot be superior survival insurance designed for the rich and that there cannot be superior survival insurance in the free market that charges a high price. Suppose there is a limited supply of superior insurance which charges a higher price, then people with the greatest ability to pay will take priority in buying it. However, the Difference Principle in QALY implies that if those in greatest medical need will benefit most from superior insurance, then the superior insurance should be offered in priority to those with the greatest need. Only if the supply of targeted sources and treatments were unlimited would the Difference Principle allow those having lower infection risks and better health conditions to have them. However, the empirical evidence is that, in a market where superior survival insurance is available to those who are affordable, the superior insurance tends to draw talent and resources away from those in greatest need, impoverishing the public sector. Hence, to maintain the Difference Principle in public health, such insurance should not be permitted in the market. This point is, of course, difficult to execute and open to various controversies.

When we suggest survival insurance as a primary good in Chapter I, we do not specify which category of insurance it is. It is, by definition, distinguished from traditional health insurance. Traditional healthcare is personal healthcare: a person pays a price and gets the coverage that matches the price. The pandemic is a context in which people do not normally think of, as we mentioned that the concept of health is public instead of private. Because a person's well-being depends on other people's behaviors, survival insurance would be better served in a different form of protection—**public health insurance**. In the context of the pandemic, a person being covered by the public health insurance benefits others, hence the beneficiaries are not limited to that person but also includes everyone around her. Because it is public insurance, one's personal preference does not matter that much under it. The bottom line and the primary purpose of this insurance are to guarantee the minimum, and whether to allow the maximum depends on resource availability. Because of its restriction on price differences, it is state-owned.

In a sense, the public enforcement of general vaccination bears similar non-exclusive reasoning. Given the difficulty of enforcing people's public health practices, mandatory vaccination is cost-effective in reducing viral spread. Because the failure to get a vaccine is primarily dangerous to others, no one carries the specialty to put others at risk. Thus, like survival insurance, getting a vaccine ensures other people's safety, hence there is ideally no exemption from the general obligation to be vaccinated.

Survival insurance is comparable to other pandemic policies, except that it is in the form of insurance and it serves the purpose of ensuring health justice. Because the equality ensured by survival insurance is substitutable for maximizing public health outcomes, offering survival insurance is not pareto-efficient. The indifference curves for survival insurance also inspire us to

consider other indifference curves that describe conflicting social interests: While civic resistance of COVID interventions comprises numerous reasons, it is primarily caused by economic concerns and the desire for mobility.

Economic Costs versus Public Health Outcome

The difference between survival insurance and intervention policies is that survival insurance maintains justice, but it cannot restore normality. Society relies on intervention policies to restore normality, and intervention policies have a much more direct contribution to the public health outcome.

The most significant and well-known tradeoff in pandemic intervention policies is between the economy and desired health outcomes. The tradeoff is presented in two ways: the economic burden that intervention policies impose on individuals, and the economic burden on the institution's budget. Because individuals do not possess direct control of the economic policies, the costs they suffer in lockdowns will be reflected through protests and lobbying, which in turn affects grants and subsidies. Because a successful intervention policy requires the collaboration of people, while COVID intervention policies impose economic costs on society, citizens also demonstrate a willingness to pay. "To the extent that we can observe market prices related to effects of policies or collect data on citizens' 'willingness to pay' for given kinds of effects, we will have a convenient way of assigning social value to the diverse effects of a given policy" (Fleishman et al. 17). By a willingness to pay, we mean the costs that citizens, on average, are willing to bear with if they are asked to stay at home. We can understand it as a measurement of well-being to be traded with the policy restrictions. In imposing COVID intervention policies, people's willingness to pay decreases over time, while the societal costs of COVID interventions

increase over time. It does not mean that people are valuing their lives more, but because people are able to pay less due to the impact of COVID. Their valuation of free movement rises as compensation both economically and mentally.

Civic willingness to pay for policies is not equivalent to civic willingness to accept the policies. While some societies are strongly against lockdowns, there are societies that protest against the cancellation of lockdowns. Civic willingness varies across regions. However, civic willingness to pay not only depends on the public attitude towards interventions but also the economic pressure strengthened by the persistence of lockdowns. Thus, a country may have many people who find lockdown policies acceptable, but the civic willingness to pay continues to decrease in the meantime. While we cannot fully account for the overall loss in the economy because it involves too many factors, we want to focus on discussing the civic willingness to pay and the institution's budget.

Speaking of the economic burden on individuals, the study "COVID-19: Health and Economic Impacts of Societal Intervention Policies in the U.S." by Bolori and Saghafian calculates the costs of COVID interventions.

Our results show that, compared to a hypothetical no intervention during March-June 2020, the policies undertaken across the U.S. on average saved each person up to 4.04 days worth of QALY while incurring \$3,284.67 for him/her. Had the states undertaken more strict policies during the same time frame than those they adopted, the increase in the average QALY and cost per person would be up to 6 days and \$4,953.81, respectively. We also find that stricter policies are not cost-effective at the typical willingness-to-pay rates. Imposing such strict policies, however, may be inevitable in the near

future, especially if the risk of a second wave of COVID-19 increases (Boloori and Saghafian, 1).

In their study, the stricter the policies, the higher the life outcomes and economic costs.

However, there are diminishing marginal returns on the intensity of COVID interventions—the more intense and persistent the lockdowns, the less and less cost-effective intervention policies become. Cost-effectiveness refers to “a way to examine both the costs and health outcomes of one or more interventions. It compares an intervention to another intervention (or the status quo) by estimating how much it costs to gain a unit of a health outcome, like a life year gained or a death prevented” (Center for Disease Control and Prevention).

Ideally, grants and subsidies increase proportionately to match the gap caused by decreasing civic willingness to pay for lockdowns. The costs of policies can vary, but the efficiency and cost-effectiveness of policies depend on their compliance with the willingness to pay. COVID intervention works best when the costs it generates to society are equal to or below society’s willingness to pay. If COVID interventions cost more than citizens can afford without satisfactory compensation, people will resist, and intervention policies never become efficacious. Hence, the lower society’s willingness to pay, the more grants the government must offer to keep civic willingness to pay at a sufficient level.

As time goes by, the government will have to give more grants to keep COVID policies productive, and the government budget bears increasing pressure over time. The cost-ineffectiveness in this study implies that QALYs become more and more expensive to protect. Even though a consistent lockdown increases total health outcomes, the economy bears an increasing burden over time. Returning to the consideration of survival insurance, though we discuss insurance apart from other types of COVID interventions, it is still within the budget. We

can use the Difference Principle to mitigate financial distress in maintaining survival insurance, but there is nothing related to the Difference Principle that we can do to save the budget in lockdown policies.

Rather, the prevention of high economic costs requires institutions to act as early as possible. The greatest issue that institutions make in COVID interventions is that they missed the best time to impose lockdowns and grants, and society's willingness to pay decreased to the extent that COVID interventions became too expensive because 1) long-term lockdowns are cost-ineffective and 2) more and more grants are needed to keep citizens engaged. To impose efficacious COVID interventions by giving grants that might exceed the public capacity is to quench thirst by drinking poison. Rather than struggling to fill in the expanding gap between civic willingness to pay and the costs of intervention policy, it is wiser to prevent the gap from developing at the very beginning.

We compare the cost of intervention policies with that of survival insurance and realize that survival insurance **also risks being cost-ineffective** because ensuring equality is never pareto-efficient. We have also ruled out the possibility for survival insurance to hold different prices, meaning that there cannot be a competitive market for survival insurance. It is worth mentioning that in Rawls's belief, distributing income is not pareto-efficient for the economy. However, if we take a different perspective and consider the purpose of policymaking, which is to raise the overall well-being, then distributing income is very efficient in raising the overall well-being. A competitive market may be pareto-efficient for the economy, but it is not pareto-efficient for raising people's satisfaction.

The economic tradeoff brings our attention to that both grants (which associates with civic willingness to pay) and survival insurance (which associates with the public need for health justice)

are demanded by the social preferences. When a social preference conflicts with a policy goal, protests and civil obedience occur in response to lockdowns. Suppose that a socially preferred good and the public health outcome are substitutable, can we portray the indifference curves that present the tradeoff? How does the preference tell us about social preference in both intervention policies and survival insurance?

Mobility versus Total Health Outcome

Ideally, in a social psychology study, we can model a policy possibility frontier through survey research by asking well-designed questions to find out how different strengths of policies affect people's perceived happiness. We can let participants rate their experiences from 1 to 10 given different hypothetical scenarios and run a linear regression to find out their indifference curve and PPF. The problem with this kind of study is that subjective well-being in COVID is extremely complicated. It includes sorrows, fear of the disease, concerns for economic losses, and resistance to constraints on freedom. We cannot sum up the psychological factors to one single variable and place it on the vertical axis. As Fleishman et al. point out, "it would be difficult to give meaningful responses to a survey of 'willingness to pay'" (Fleishman et al. 16). Because responses are subjected to changes, it is impractical to deduce any general principles from subjective well-being for the institution.

If we pick one factor that has a substantial impact on subjective well-being and can be regulated by policymakers, it would be the level of mobility in social activities. In Chapter I, we mentioned that an infringement of basic liberties is never justified by economic welfare. However, the freedom of movement is nothing like Rawls's definition of basic liberty, therefore the desire for mobility should not be treated as falling under Rawls's First Principle, but as a

social interest. The social interest of mobility comprises two assessments: the assessment based on how mobility affects financial well-being, and the symbolic assessment which indicates the meaningfulness of mobility. It is critical to consider both assessments, because if the financial status is the only assessment, then grants that keep up with the willingness to pay can hypothetically keep people at home forever.

Boloori and Saghafian discover that limiting residents' mobility will increase the health outcome per person without imposing significant economic costs on each person, given that residential mobility is not work-related. Boloori and Saghafian also point out that the effectiveness of alternative policies (e.g., mandating face covering) in part relies on the rigidity of intervention policies, so the strength of quarantines and lockdowns enhance the impact of mask-wearing. If Boloori and Saghafian's research is valid, then we know that mobility and public health can be substitutable for one another at a low cost. While we are not able to model the policy possibility frontier (PPF)⁵ for them, we are aware that all countries are subject to this frontier. Countries with the same technological advancement and economic structure will have similar if not the same PPF. Based on the premise that two countries share the same PPF, what causes the differences in their policies are their social preferences. The indifference curves for the US will exhibit similar shapes to that of the UK, Canada, Germany, and most of the western European countries. They will be very different from the indifference curves in countries like China and South Korea.

⁵ Policy possibility frontier is a graph that presents the production possibilities of two goods given fixed resources.

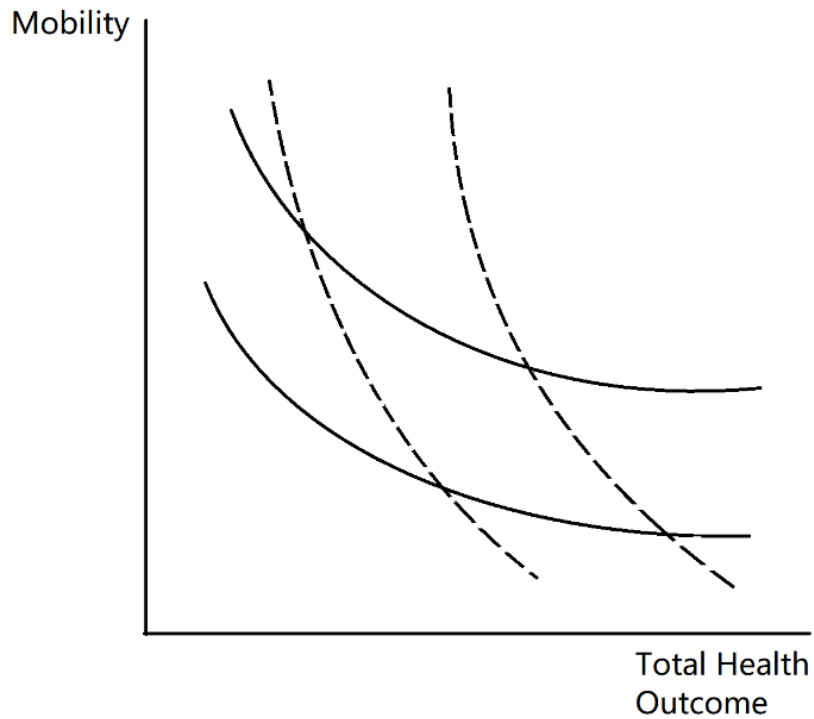


Figure 3

Once again, we are borrowing Rawls's graphs of intuitionism to present the tradeoff between mobility and total health outcome (Figure 3). The slope of the curve indicates the relative weights of the combinations, which include the level of permitted mobility and the total health outcome. The solid lines represent a person's judgments which give more weight to mobility, and the dashed lines represent another person's judgment which inclines towards total health outcome. Assume that all countries we put into this model have the same PPF for mobility and public health, meaning that they have the same policy capacity. In most western countries, people's indifference curves tend to mimic the solid lines instead of dashed lines because people appear to be unwilling to exchange mobility for public health. People in eastern countries, however, appear to be in favor of the dashed lines.

We are aware that restricting mobility is an effective strategy to return society to a normal condition, and the solid indifference curve does not serve this purpose. One question and perhaps the most critical moral question we ask during COVID is: If it is to our knowledge that preserving public health is better than allowing mobility, and we know that the public is acting against a better solution, does the institution have an obligation to alter social preferences?

Social Preferences

Whether an institution has the obligation or the right to alter social preferences are completely different questions, but the answer to this question is not associated with either of them. Even if the public adopts the solid lines as the indifference curves, it does not guarantee that mobility over public health is what they really want. We deduce the need for survival insurance because people have a rational preference for health justice. Survival insurance is not a primary good that we normally think of under a normal condition, and based on people's rational preferences, we reveal survival insurance by pushing the social contract to a logical extreme. To suggest we need to alter social preferences would be self-contradictory because we will not be able to deduce survival insurance if we do not follow social preferences in the first place.

Aside from the fact that different people may exhibit different willingness to take risks of infection, thus different preferences between mobility and public health (this is especially true across different age groups), COVID reveals a contradiction between stated social preferences and rational social preferences. Unlike rational preferences, stated preference may not be what people want under intriguing effects of misinformation and disinformation. Stated preferences can be misleading if the choice-maker is misinformed or disinformed, given that the policy is rational and well-designed. A simple example would be mask-wearing. Early in March 2020,

people were informed that wearing masks would not help prevent infections. In the meantime, countries with earlier outbreaks and research warned that the virus is airborne and cannot be effectively blocked by fabric masks, but the media did not transmit the information effectively to the public. As a result, the effect of disinformation not only caused more infections but also generated obstacles to subsequent face-covering policies. Returning to our question, the institution may not have the right or obligation to alter social preferences, but it is perfectly capable of misleading stated preferences or misreading rational preferences.

After observing the wide-ranged protests against lockdown policies, it is easy to ask: why can't we derive a social preference from the sum of individual preferences, including those with social interests against the pandemic policy? The answer is that establishing social preferences is not a bottom-up process but is a top-down process: "The idea is that with respect to some goods, activities, and conditions individual preferences should not be the basis for assigning social value. Instead, society as a whole should establish the value without reference to individual preferences." (Fleishman et al. 17) If we derive the social preference by summing individual preferences, the summation will be problematic. For example, wearing face masks is scientifically more protective than not wearing masks, indicating that the misbelief against wearing masks is flawed. It will not make sense to treat a pro-mask individual preference and an anti-mask individual preference equally if anti-mask is a misinformed preference. Further, "The simple summation of individual preferences attached to effects fails to guide policy because it ignores legitimate social, as opposed to individual, values, and the distribution of gains and losses among the individuals in different social positions" (Fleishman et al. 17). In order to benefit everyone, the social preference has to be greater than the summation of individual preferences, meaning that a collective goal will make everyone better off. It cannot be the

reverse, for that individual preferences are too discrete to distribute resources through strands of policies.

In sum, the fundamental issue in pandemic interventions points to the underrepresentation of rational social preferences. We derive survival insurance from rational preferences under a flexible social contract and demand that intervention policies execute the social contract to meet rational social preferences. Failure to do so leads to unsuccessful COVID interventions.

Chapter III. Criticisms

This study serves as a thought experiment; by deducing from Rawls's First and Second Principle we come up with a new primary good—survival insurance. We are *not* establishing any healthcare plans or life insurances through this project. We use this primary good to analyze the major tradeoffs policymakers encounter in pandemic policymaking. Our hypothesis of survival insurance and analysis of pandemic policies tradeoffs face many challenges. First of all, much of our argument is built on the measurement of QALY, which has its own limitations. Second, offering survival insurance is only affordable in countries that have an independent hospital system. In reality, many developing countries do not have the human resources to establish public health insurance, in which case we will expect the Difference Principle to apply across borders. Rawls however does not believe that the Difference Principle works internationally. Third, we admit in the first chapter that most of this study focuses on the special conception, and we avoid discussing policies under the general conception on purpose.

The first problem of our study is the use of QALY in public health measurement. Though QALY measures the quality of life, the quality is health-related and does not relate to a person's overall well-being. Our response to this objection is rather short. When economists subtract

different values of QALY from different policy effects, QALY turns out to be a substantial measurement of policy outcomes. The limitation of QALY is that it does not describe people's mental well-being in the pandemic. We mentioned in Chapter II that subjective well-being can be a good substitute for QALY for policy measurement, however, subjective well-being is too complicated for our discussion. If it is proven to be a more accurate measure than QALY in measuring policy effects, then we will consider it as a more suitable option.

The second problem of this study is whether survival insurance can be afforded by every nation. Ideally, survival insurance should be offered by every nation, however, many countries do not have the capacity to distribute survival insurance. Many countries require international humanitarian support in distributing medical necessities. In this case, we expect the Difference Principle to apply across borders. However, Rawls himself does not believe that the Difference Principle works this way. Rawls argues about domestic justice and international justice differently. According to him, the Difference Principle only applies to the basic structure. "Rawls further seems to suggest that the "basic structure" of the international realm is quite different from the basic structure of the domestic state", and "[a]s a consequence of this lack of an international basic structure, Rawls argues that the moral objections to inequality in the domestic case do not apply" (Blake, et al). Because the basic structure does not serve on an international stage, Rawls believes that there is no sufficient common ground to support a global social contract.

However, the reality is that we have a common ground to support a hypothetical social contract across borders based on the very fact that the virus spreads and mutates. Even if a prosperous country controls COVID, with an adjacent country suffering through the disease, the prosperous country continues to face the threat of infection across borders. Simply shutting down

borders does not help, because COVID disrespects borders by spreading through waters and frozen imports, and the mutation gets increasingly difficult to treat. Hence, it is to the prosperous country's benefit that it helps another country control COVID. This brings back to our discussion of survival insurance as public insurance, since the beneficiaries are groups instead of individuals. Suffice it to say the COVID creates a common ground for an international social contract, hence the Difference Principle should apply to raise the least well-off.

The final criticism is that we avoid discussing the general conception on purpose, even though we mentioned that the Stage II of the pandemic has a tendency towards the general conception. Under the general conception, societies cannot offer sufficient economic and materialistic condition adequate to support basic rights and liberties. Consider an extreme case of the general conception: in a country of famine, bread is the own currency. Income is under Second Principle but measured by bread. Each person has less than three days of bread supply as her income, so everyone is starving to death. In such an extreme scenario, one can hardly withstand the serial order and claim that advancement of income is never justified by an infringement of basic rights. An infringement of basic rights is in fact needed to let society exist.

Because we assume in this study that the situation continues to deviate from normality, it is foreseeable that a serious pandemic can pull a prosperous country from the special conception into the general conception. Mutations become deadly. A severe shortage takes place such that even minimal survival insurance cannot be ensured. Controlled mobility still leads to high-level infections. Under a general conception in the form like this, all the equality and justice we discussed in this study will not work. We cannot assure whether it is possible to continue offering survival insurance under the general conception, and we cannot foresee the future of

intervention policies. Hence, we will close the discussion and leave the general conception for a separate future review.

Epilogue

We offer the following suggestions for policymaking: When the pandemic causes moderate scarcity, any domestic institution shall treat survival insurance as a hidden primary good under the Second Principle and prepare survival insurance for an inevitable future outbreak. The institution should establish survival insurance as public health insurance to ensure equal access. In enforcement, the institution should prevent the emergence of superior survival insurance that may draw resources from the public sector. The Difference Principle applies in the coverage of survival insurance, requiring that people under inferior health conditions or high risks of infection receive priority treatments. The limitation is that survival insurance only works well under manageable scarcity since there will not be many sources available once society moves towards extreme scarcity.

The institution must execute all the legitimate strategies needed to prevent Stage II, a stage that signals the transition from the special conception to the general conception. The institution should make the public aware that rigid intervention policies are a Necessary Evil created to prevent more general sacrifices on basic rights. Economic wise, the institution should keep track of the evolvement of civic willingness to pay and give sufficient grants as early as possible to avoid overwhelming the budget. In balancing competing social interests, institutions must keep the information as transparent as possible to promote rational preferences and avoid causing misinformed social preferences.

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