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Beyond the Altruistic Donor: Embedding Solidarity in Organ Procurement Policies

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Abstract: Altruism and solidarity are concepts that are closely related to organ donation for transplantation. On the one hand, they are typically used for encouraging people to donate. On the other hand, they also underpin the regulations in force in each country to different extents. They are often used indistinctly and equivocally, despite the different ethical implications of each concept. This paper aims to clarify to what extent we can speak of altruism and solidarity in the predominant models of organ donation. It also raises the ethical question of whether these categories are adequate as a basis for such models, bearing in mind that organs are a scarce resource and that a shortage of them may mean that fewer lives are saved or improved.

Keywords: altruism; solidarity; transplantation; models of consent; ethics; public health



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1. Introduction

Organ shortage is a problem for health and transplantation systems worldwide [1]. In the European Union, eleven people die every day waiting for a transplant [2]. Not only are these deaths avoidable, but the shortage of transplantable organs also raises the ethical issue of their fair distribution, because allocating an organ to one patient is generally equivalent to denying it to another.

Organs for transplantation are obtained from living and/or cadaveric donors. Advances in technology and medicine may one day offer viable alternatives to donation, such as xenotransplantation, organogenesis, and cellular transplantation. However, at the moment, the procurement and distribution of this scarce resource depend on peoples' willingness to donate [3].

The ethical justification for organ procurement, both living and cadaveric, is generally considered to rest on the principle of autonomy, i.e., the donor's own consent and/or the authorisation of family members. The WHO's guiding principles on human cell, tissue, and organ transplantation include voluntary consent, altruism, and the protection of public health [4]. Thus, the most common organ procurement systems around the world are based on the idea that organ donation is a free gift that depends on individual autonomy. In most countries, this translates into organ procurement systems based on individual and/or family altruism.

However, the emphasis placed on altruism by transplantation systems can hinder their efficiency (in terms of maximising organ retrieval) to the extent that not everybody wants to donate. To tackle this problem, an increasingly common strategy, especially in European and Latin American countries, is the implementation of an opt-out model, in which everyone is considered a donor by default unless they have explicitly expressed their refusal during their lifetime. Another strategy is to provide incentives, which can be financial (e.g., payment of health care costs in the case of living donation, payment of

burial or repatriation costs in the case of deceased donation) or of another nature (e.g., reciprocity or prioritisation systems in case a family member needs an organ) [5]. These incentives, which constitute rewards for organ donation, may be greater or lesser and may limit the donation's voluntary and/or altruistic nature. Taking the incentives to their logical conclusion leads to the market model (buying and selling organs), which is no longer based on altruism, but on individual interest.

In this article, we will examine the ethical justifications for organ procurement. We will argue that altruism and self-interest, both based on the underlying principle of respect for individual autonomy, are not the only viable ethical justifications for recovering people's organs. We will show that there exists an alternative rationale based on the principle of solidarity that has not received the attention it deserves in the ethical literature on organ procurement. The purpose of this article is to vindicate solidarity as a sound ethical principle for organ procurement, alongside or in addition to altruism and self-interest.

We will begin by clarifying what we mean by altruism and solidarity and by describing the different consent models for organ donation, both living and cadaveric. We will focus on the ethical use of these concepts, leaving aside their other dimensions, including the legal, social, and political uses of solidarity. Then, we will analyse the extent to which we can speak of altruism and solidarity in each of these consent models. Finally, we will explore the theoretical grounding of cadaveric organ procurement models beyond autonomy-based altruism, by invoking solidarity from a public health perspective.

2. Altruism and Solidarity

Although sometimes used synonymously, the terms 'altruism' and 'solidarity' have different conceptual nuances. These differences are relevant and, as we shall see, must be taken into account in the organ procurement debate. In this section, we start by clarifying the concepts of 'altruism' and 'solidarity' and pointing out their similarities and differences. Then, we introduce the concept of 'effective altruism', which is increasingly discussed as a possibility to address organ shortage.

2.1. Definition of Altruism

Altruism is a kind of behaviour or motive for acting. An altruist act is "motivated by a desire of benefiting someone other than oneself for that person's sake" [6]. Altruism is thus a motivation to benefit others for their own good. Individuals behave altruistically when their main reasons for acting are other-regarding. For example, if the main reason for a living donor to donate their kidney is to benefit the recipient, we can say that they are behaving in an altruistic manner.

While this previous categorisation seems intuitive, some deny the existence of altruistic acts. Psychological egoism states that seemingly altruistic actions are actually self-interested [7]. According to this theory, the ultimate motive of a kidney donor would rather be personal satisfaction or to atone for past wrongs by doing a good deed. In this article, we will not enter into this discussion and we will assume, based on the most important recent criticisms of psychological egoism [6], that altruism exists and that it serves to explain many human behaviours—including some in organ donation. In conclusion, we will assume the canonical definition according to which altruism is a kind of behaviour motivated by pursuing the good of others.

2.2. Definition of Solidarity

Solidarity is more difficult to characterise and define [8]. Although this concept is very much in vogue—thanks in part to its exaltation during the COVID-19 pandemic [9,10]—and has received a great deal of academic attention in recent years in the bioethics and public health ethics literature, it is often used in an ambiguous, vague or polysemic manner.

Barbara Prainsack and Alena Buyx provided a working definition in their influential report *Solidarity: reflections on an emerging concept in bioethics*, commissioned by the Nuffield Council [11]. According to them, "solidarity signifies shared practices reflecting a collective

commitment to carry ‘costs’ (financial, social, emotional, or otherwise) to assist others”. Similarly, Angus Dawson and Marcel Verweij [12] claimed that “solidarity involves the voluntary commitment to accept burdens for the sake of others”¹. Furthermore, Angus Dawson and Bruce Jennings [8] argued that solidarity should be understood as the personal identification with the collective commitment to helping others to whom we are related in different ways [13].

Following these authors, solidarity can be described as: (1) a shared, collective norm, (2) an implicit or explicit moral commitment, meaning that the solidary person thinks that behaving in such way is morally better for the wellbeing of the community than not doing it, and (3) a disposition to be wronged in exchange for a general benefit. Accordingly, we will define in this article the concept of “solidarity” as the normative commitment that claims that people should assume personal costs that are necessary to benefit or assist other particular individuals, specific groups, and/or society in general.

2.3. Similarities and Differences between Altruism and Solidarity

Altruism and solidarity share common features. Both show consideration for the welfare of others. In other words, both concepts express a crucial moral component that goes beyond self-interest and implies performing actions for the good of others, or moving beyond the self-centred view of wellbeing. However, these concepts differ in three important ways.

First, while altruism does not always involve costs or personal self-sacrifice [6], solidarity involves assuming personal burdens, whether voluntarily or not, to contribute to the good of others, as stated by the above definitions. Solidarity in fact serves to morally legitimize the assumption of these costs. In other words, it gives normative reasons for their justification, and can do so irrespective of the motivation of the parties involved (and their concomitant personal advantages or disadvantages). Namely, solidarity is not only an autonomous personal disposition, but also a heteronomous political organisation of citizens’ behaviour.

Second, altruism helps us to explain certain behaviours and the motives behind them. Altruism should be understood, in this sense, as something that allows us to describe and categorise human actions (or even those of other species) and the psychological motivation that underlies them. Altruism is not a purely descriptive term, though, as it is usually associated with a positive moral value. Indeed, people who behave altruistically are often praised for it. In this sense, we can say that altruism is a thick concept with a positive valence. However, in our view, there is no such thing as an “altruistic imperative”, that is, as a kind of moral duty to be altruistic. In a nutshell, altruism cannot be elevated to a normative level. Solidarity, conversely, imposes certain actions based on their moral value and has, therefore, a normative character.

There are acts, institutions, or systems that are solidary, in a descriptive sense. However, one can also claim that some acts, institutions, or systems should be solidary, in a normative sense. In this article, we are particularly interested in highlighting the normative force of solidarity as a principle, namely, its prominent normative aspiration. Solidarity could be defended arguing ethical, political, or economic reasons, that is, from those disciplines that guide human action. As we will see, this distinction will be key for our latter argument.

Third, as motivations to act are part of moral agency, altruistic motivations fit well with the individual deployment of autonomy: one can decide to act altruistically or not. In other words, altruistic (or otherwise self-interested) behaviour is something that individuals can choose. On the contrary, solidarity and autonomy do not necessarily have to correspond [14]. Consider the following example: when we compare the progressive taxation of various countries, we can say that the solidarity of the Scandinavian tax system is insofar more salient than the one of the U.S., as citizens of the Nordic European countries have higher tax burdens on their income to pay for public expenditures in comparison to U.S. taxpayers. However, it is entirely plausible that there are Scandinavian citizens who pay their taxes not for altruistic motivations (such as contributing to their welfare system),

but to primarily avoid fines or prison. That means that one can participate in a very highly solidary system without being altruistically motivated. Other examples of non-optional solidarity include compulsory vaccination, which some have considered analogous to taxation [15], or a model of mandatory procurement of blood [14]. These two cases would clearly be based on solidarity even if they did not respect the autonomy of the vaccinated or the blood “donors”, as long as they impose burdens on individuals for the sake of others or for the public good.

2.4. Effective Altruism

Before moving forward with our argument, it is convenient to mention an influential version of altruism in ethics which has recently been discussed in organ procurement debates: effective altruism. The idea of effective altruism has its origins in the well-known article *Famine, affluence and morality* [16] by Peter Singer. Singer proposes that there is always a moral duty to act in order to avoid harm, as long as the act itself does not create consequences as serious as the wrong we are trying to avoid. If I see a drowning child and I am able to help, I have a moral obligation to act [17], even if no one else is acting, even if I do not know the child, and even if I will ruin my shoes and suit when I dive into the water. Importantly, there should not be any moral distinction between the people I know and the people I do not know.

Effective altruism has been applied by some activists to living organ donation, usually kidney donation. One example is the initiative WaitListZero, illustrated by the testimony of Thomas Kelly and Josh Morrison [18]. However, effective altruism is presumably insufficient to tackle the major organ shortage problem, as we will further explain in the following sections.

3. Organ Procurement Models

In this section, we briefly describe how the different organ procurement systems work and, in particular, how they relate to individual consent and family authorisation. Then, in the next section, we will examine how and to which extent altruism and solidarity are present in these different organ procurement systems or can be used as an ethical justification for them.

There are two radically different modalities of organ procurement. The first one is living donation, and the second is cadaveric donation. In living donation, which is also the least common, we can distinguish two different types: directed and non-directed. In directed donation, a person donates an organ to a particular recipient with whom they have a biological or emotional bond, for example, parent to child, brother to sister or friend to friend. There is also the directed altruistic donation, where the organ is donated to a specific, identified recipient with whom the donor has no biological or pre-existing emotional ties. These cases generally involve third parties, which can be persons or other mechanisms, including social media [19]. There is also the non-directed donation, where a person donates an organ to an unknown recipient. Usually, when a person needs an organ and their relatives cannot be donors due to medical incompatibility, they can make a crossed or chained non-directed donation. This means that the donor gives an organ to an unknown recipient, in exchange for their relative receiving an organ from an unknown compatible donor, either living or cadaveric. Finally, there is the so-called Good Samaritan donation, where a person simply wishes to donate to anyone who could benefit from a transplant, out of pure altruism, without any emotional or biological bond to the recipient, with no need or expectation of reciprocity, and without any remuneration or reward in return.

In cadaveric donation, there are two main systems: opt-in and opt-out. The latter is the most common in Europe, towards which an increasing number of countries are changing their laws [20]. These systems are usually defined by each person’s decision—expressed in life—to be included (opt-in) or excluded (opt-out) from the list of potential post-mortem organ donors. However, since in many cases people do not make any decision during their lifetime, what really distinguishes these systems is the default option when the wishes of

the deceased (and of the family in those countries where they are allowed to intervene in the decision) are unknown. In these cases, organs would not be removed in opt-in countries, whereas they may in opt-out countries. Another common way of classifying cadaveric donation systems refers to the type of consent given by the deceased to the removal of their organs: explicit (or “informed”) consent in the first case and presumed consent in the second. This definition has to do with how organ procurement is ethically justified: although in both cases it is based on the ethical principle of respect for individual autonomy, opt-in requires strong (explicit) consent while opt-out is content with weak (presumed) consent. However, we will see below that there may be a different ethical justification for the opt-out system.

These models coexist with different ways of encouraging donation, such as mandatory choice. Mandatory choice means that it is somehow obligatory to make a decision about organ donation (when renewing a driving license or an ID card, when paying taxes, etc.). However, in case some people fail to express their choice (e.g., because they do not have a driving license), then there must be a default course of action, which is either to proceed with organ retrieval or not. Therefore, all mandatory choice necessarily rests on an opt-in or opt-out model (unless all individuals were successfully forced to make a decision).

Prioritisation-reciprocity in organ allocation can also be understood as a model of organ procurement. However, it is rather a form of organ allocation for transplantation that aims to motivate society to be inclined towards donation. Prioritisation is based on the idea that when making a decision about organ allocation, the potential recipient’s own willingness to donate must be weighed up [21]. Thus, potential organ recipients who have declared their willingness to donate (before they themselves develop a disease and before they are put on an organ waiting list) should be given a relatively higher priority in accessing an organ than those who are not willing to donate their healthy organs in the event of their own death. This model is not very common, operating worldwide only in Israel, Chile and Singapore [22,23].

Another very rare model is the one based on the buying and selling of organs, which only legally exists in Iran, operating as a regulated market in which the state acts as a buyer [24]. Organ market also operates more or less illegally in some zones of the world. As it is a highly contested and problematic model², and because of its relatively lower occurrence, we will not focus on this model in this article.

Finally, the automatic procurement model (also called routine recovery or conscription system), which does not exist in practice, is based on the idea that organs of deceased people should be confiscated, even if it goes against their wishes. This is because organs are considered a public good that should be regulated by the state [25]. This model can take several forms, depending on whether we consider the family’s preferences and/or the potential harms of not doing so. For example, an automatic “soft” model would confiscate the organs of the deceased unless the family objects, is too distressed, or may suffer too high a moral damage, while a “hard” model would allow no exceptions.

These preliminary distinctions should help us to avoid confusion in what follows. In the next section, we will discuss both living and cadaveric organ procurement in relation to altruism and solidarity.

4. Altruism and Solidarity in Organ Procurement Models

As mentioned above, the cornerstone of the justification for organ procurement models is altruism. In both living and cadaveric donation, it is a fundamental requirement for organ procurement, at least in the most widespread models of living and deceased donation. Despite this, the concept of solidarity is used interchangeably and equivocally in texts and discourses related to organ donation for transplantation. According to the definitions of altruism and solidarity provided above, we intend to answer the following questions: to what extent can we speak of altruism and solidarity in the different models of organ procurement? Are the principles of altruism and solidarity useful and valuable to

understand and to justify ethically the different modalities of organ procurement? Which systems are more altruistic and which more solidary?

4.1. *Living Organ Donation*

As mentioned earlier, effective altruism can be applied to living donation, provided it is a case in which a person has the power to help another in an outstanding way (by saving their lives) without seriously compromising one's own good [17,26]. Of course, the burdens are considerable, but they are not as notable as the evil that would be avoided: a human death. In the brief example *Why You Should Donate a Kidney to a Stranger* [27], Singer tends to be cautious in recommending living organ donation (mainly kidney donation), highlighting the remarkable exceptionality of such an invasive and demanding procedure—compared to other typical initiatives of effective altruism like the donation of money.

Living kidney donation can meet the requirements set by effective altruism: the amount of harm donors suffer is not comparable to the amount of suffering they avoid through their altruistic act. A living kidney donor has a very low chance of dying or suffering a severely diminished quality of life, whereas they would be saving a person's life and considerably improving its quality. The interest in this issue by the effective altruism movement is so strong that some advocates have founded non-profit organisations to support and encourage living kidney donations. Some supporters of effective altruism have created a federation to support living kidney donation [18] and have even advocated the possibility of being able to charge money for it in order to donate it, thus maximising the return on the altruistic act [28]. Sure enough, this model is based only on altruism and is ultimately grounded in the decision of each individual person to donate their own organs.

However, this kind of proposal presents at least two problems. First, living donation is such an invasive, supererogatory intervention that it is highly doubtful to achieve a sufficiently high rate of donations based only on this altruism. Secondly, altruism cannot be transformed into public policy. Altruism is a motivation driven by the autonomous decision of the agent; it can be encouraged, but it cannot be enforced by law in any way. Organ shortage is a public health problem, and it should be addressed by public health policies. Altruism does not have enough normative force to be implemented in this way. Some critics of effective altruism have already pointed out these limitations [29].

Furthermore, living donation is not necessarily and exclusively motivated by altruism. Regardless of the donor's personal interest in benefiting the recipient, especially when it is their spouse, child or sibling, the donor may also feel pressured by the family or social group to which they belong. There is a long debate as to whether the gender disparity (i.e., more female than male are living donors) can be explained by gender differences in moral psychology, with women being more altruistic or having a greater "morality of care", or rather by asymmetries in social power, such as the internalisation of role expectations [30–33].

4.2. *Cadaveric Organ Procurement*

In the case of cadaveric donation, the question of whether it rests on altruism, solidarity, both, or neither, depends on which model of consent we examine. The opt-in model appears to be clearly altruistic, not only because it relies on people's willingness to donate, without any quid pro quo, but also because it needs people to take a further step and actively express their decision in writing. When people fail to register their wishes while alive, some countries ask the deceased's relatives to decide, but the default course of action is not to retrieve the organs.

By contrast, it is unclear to what extent the notion of altruism supports the opt-out model. As mentioned above, opt-out and presumed consent are often confused, although they are different in nature. Opt-out is a policy whereby people's organs can be retrieved unless they have explicitly expressed their refusal. Presumed consent is one specific justification for this policy. It is based on the assumption that, unless there is evidence to the contrary, people consent to the procurement of their organs, thus allowing us to take their

organs as if they had actually consented. While this is certainly the most cited justification, there are other alternatives.

Ben Saunders [34] argued that an opt-out policy can be based on genuine (albeit implicit) consent without the need to make controversial assertions about “presumptions” of consent. Indeed, says Saunders, if consent(ing) is an action that has to be performed, then it cannot be presumed; instead, we can simply appeal to the familiar idea of tacit consent. If tacit consent is to count as actual, two conditions must be met: first, all people involved must be clearly informed that silence implies acquiescence and will be interpreted as such; second, it must be possible for people to opt-out without facing unreasonable costs for doing so [34]. It is debatable whether these conditions are met in contemporary opt-out systems, and there is some evidence of the contrary [35,36]. In any case, both justifications rest on the idea that the procurement of organs from a corpse is ethically acceptable as long as it is done with the donor’s consent, in accordance with the principled bioethics of Beauchamp and Childress [37].

Saunders also proposed a bolder justification for opt-out policies that does not require the deceased’s actual consent but an idealised (i.e., non-actual, fictitious) form of consent that he calls “normative consent” [38]. According to his rationale, if (a) people have a moral duty to donate their organs after death, which means that it is wrong for them to withhold their consent, then (b) we are entitled to treat them as if they had actually consented, even if they have not (explicitly or implicitly), simply because it would be wrong of them not to consent [38]. The first step of the argument is based on Peter Singer’s effective altruism: as long as organ donation saves and improves lives at little, if any, cost to the deceased donor, it creates a *prima facie* duty to donate. This allows for exceptions whereby people are allowed to opt-out, by expressing their explicit refusal, when they feel the sacrifice is too high, for example because of their religious convictions. In these cases, there is no duty to donate. Others will want to opt-out even if they do not have a good reason to do so, i.e., a morally justifiable one, for doing so. In these cases, although there is a duty to donate, the opt-out system preserves the right of individuals to act morally wrong, by allowing them to opt-out when they have no good moral reason to do so [34]. This justification for opting-out is also based on the principle of autonomy. However, unlike the previous ones, it does not rely on altruistic motivations, but also on effective altruism.

There is at least a third possible justification for opt-out policies that is based neither on consent nor on altruism, i.e., on the principle of individual autonomy, but primarily on collective solidarity. This may be the case with the French opt-out system as originally conceived by policymakers. According to the *Comité Consultatif National d’Ethique* what underlies the French non-opposition system, as established in 1976, is not presumed consent, but a humanistic presupposition of collective solidarity whereby the human body becomes, unless the deceased had expressly objected during their life, a collective good at the service of patients [39]. No further details are provided and reading the parliamentary debates does not help either. However, it can be assumed that the ethical principles of this system are similar to those underlying the French universal health care system and ‘social security’ in general. This principle of solidarity means not only that everyone participates in the protection of every person—and benefiting themselves in turn from this protection by receiving according to their needs, which introduces a dimension of reciprocity—but also that everyone contributes according to their means and ability to pay. Thus, the state levies contributions that are not related to the risk covered but to the resources of the insured, which means that healthy people pay for the sick ones, the rich for the poor, and the working people pay for the unemployed and the retired ones. Moreover, unlike mutual insurance companies, which are linked to voluntary membership, membership of social security is automatic, compulsory, and cannot be refused. From this perspective, the main difference in the French organ donation system would be the possibility for people to opt-out.

More generally, what justifies the procurement of organs in an opt-out system based on solidarity is not the voluntary consent and altruism of the donors, but the fact that there are patients who have a compelling need for these organs, plus the fact that the protection

of people's health is a constitutional right, and that health is a social good. The pursuit and guarantee of this social good may conflict with individual interests and goods, such as respect for autonomy or bodily integrity. However, since the procurement of organs occurs after death, it seems that the harm that can be caused to a deceased person is rather limited. Here, therefore, a calculation of the balance of (individual) burdens versus (collective) benefits can be taken into consideration. In the case of cadaveric donation, this balance is clearly favourable. This does not mean that individual interests, including posthumous ones, are ignored. As with normative consent, individuals are still allowed to opt-out if, for religious or other reasons, they consider the moral cost too high for them. Thus, on the one hand, the justification for retrieving organs in an opt-out system under the principle of solidarity is the protection of patients' health and, more generally, the public good, by virtue of which everyone is obliged to surrender their organs after death, whether they consent or not. On the other hand, it is the justification for not retrieving organs from people who oppose donation that is based on the autonomy principle. In other words, organs can be recovered regardless of consent, because it is good for society, but refusals are nonetheless respected.

If we go one step further in that direction, we come across the automatic procurement model. Justification for this system may run like this: (a) organ retrieval brings immense benefit to the recipients and society as a whole, while posing a nonexistent, minor or bearable harm/burden to the deceased; (b) the needs of the living are more important than the wishes of the dead and should be prioritised over them; and (c) the welfare of society as a whole is more important and should be prioritised over the welfare of individuals who may be wronged by retrieving their organs against their will; therefore, (d) it is ethically acceptable—under the principle of solidarity—to retrieve the organs of the deceased regardless of their wishes in life.

The reciprocity-prioritisation model has also been considered by some authors [40] to be solidaristic in a certain sense, as it may encourage willingness to donate and may thus increase the scope for showing beneficence towards those who may need an organ transplant in the future. However, according to the definition of solidarity we have provided, this model would not qualify as solidarity-based since in this scenario people do not bear personal costs for the overall benefit, but as a condition of their being able to obtain some future personal benefit. It would therefore be closer to a system based on self-interest.

Finally, the buying and selling model exceeds the categories of altruism/solidarity by focusing on self-interest (in the same way as prioritisation/reciprocity) unless we are talking about donating the money obtained from the sale of an organ to another charitable cause [28]. As mentioned earlier, effective altruism advocates have proposed this idea in order to maximise the beneficence achieved by the donation. However, this effective altruism version is still too marginal to be representative. Both altruism and solidarity can be present in the process of selling an organ; however, they are not definitory of the model.

As shown in Figure 1, the different types of donation can be classified depending on their ethical justification (autonomy-based altruism or solidarity). According to our framework, live donation and opt-in would be altruism-based organ procurement models, while the opt-out could be justified on both accounts, and the automatic procurement model would be the most solidarity-based model of organ procurement.

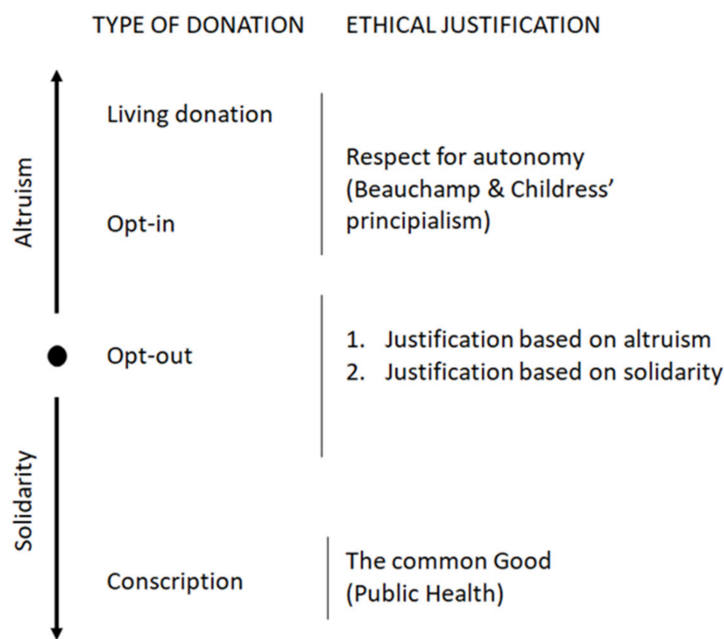


Figure 1. Altruism and Solidarity in Organ Procurement Models.

5. Discussion

At the present time, we have shown how each model of organ procurement has implicit normative assumptions (solidarity/autonomy-based altruism) that underlie it. Henceforth, we want to discuss which approach is the most appropriate for society and to argue which model of organ procurement best articulates it.

With regard to effective altruism, excessive focus on individual altruistic actions may be ineffective in addressing the problem of organ shortage. Singer does not argue that people should be forced to be altruistic; they should behave altruistically for good moral reasons, but no one has the right to force them to do so. Injustices such as extreme poverty become a moral problem for each individual separately. Following Singer, each affected citizen should act individually—motivated by altruism—to stop an unjust situation. In this version of altruism, acting for the sake of others is enough reason to constitute an important guide to action, but it is not legitimate enough to imply that individuals should be obliged to act against injustice.

Individual altruism can certainly contribute to alleviating the overall amount of suffering, but it is not enough to guarantee that its reduction will be sufficient, or even that it will occur. It is therefore inadequate to solve large-scale social problems because it is a moral category that refers to personal motivations for action. Altruism is probably not the most useful tool for assessing global problems, such as famine, extreme poverty, and, in this case, organ shortage. Extreme poverty is the result of intricate networks of decisions, relationships, and structures; it is not enough to address it through isolated decisions made by each individual in the global North. The same is true for organ shortage: it is a societal problem that requires societal solutions. The problem of organ shortage may not be solved if people choose not to act. In organ donation, the use of altruism as the main appeal is contested. Although it is a valid category for organ donation, it has previously been pointed out that it should not be the only one [41]. Some propose using solidarity or reciprocity as alternative prosocial appeals [42]. Indeed, some recent findings suggest that altruistic behaviour or altruistic values in general life do not correlate with willingness to donate [43]. Therefore, assuming that increased altruism in the population will necessarily increase organ donation may be naïve.

If altruism does not seem to be sufficient to alleviate the problem of organ shortage, solidarity does have certain advantages over altruism in terms of justifying organ donation models. First, altruism focuses on the individual, whereas solidarity can refer to systems,

organisations, society, or even humanity as a whole. Secondly, although we have a moral obligation to be altruistic in some situations (for reasons of charity, justice, etc.), altruism itself cannot be a sound normative basis for public policy design, whereas solidarity can. Thirdly, organ shortage is a public and common problem in need of public solutions. Consequently, it might be appropriate to move from a classical bioethical approach, centred on autonomy, to a public health approach more prone to narratives of solidarity. Solidarity seems to be a useful category to alleviate the issue of organ shortage. However, it is necessary to ask: how many burdens could people take on for the sake of others' wellbeing?

We have determined that the conscription model appears to be—theoretically—the most solidary according to the definition above, as it strongly privileges the common good even if it causes individual discomfort or harm. However, the conscription model poses significant ethical challenges. Mainly, for those who place a predominant value on the freedom of choice, an organ conscription model could be seen as a violation of the principle of autonomy. Other ethical problems are associated with the ownership of the deceased's body and the respect for the wishes of relatives, both of which are highly controversial issues in the ethics of organ donation. Therefore, due to these issues, it is foreseeable that a recruitment model will generate social reluctance, making it highly questionable and unworkable. The national organ procurement policies' quality of governance can be assessed using indicators such as public support for these policies [44] and in this case, some studies show that the general population is not radically against such measures, but it does not have a majority of approval either [25].

In turn, the opt-out model based on solidarity seems to be an option that maintains a balance between solidarity (by assuming that all people are donors) and people's autonomy (by making it possible for people to refuse to be donors). Although, as we have shown, it is not the most solidary model.

As discussed, solidarity itself may not be a sufficient criterion for justifying the legitimacy of a certain organ allocation public policy. So, what elements should be combined with the category of solidarity in order for a model to solve the problems of organ shortage and also to be accepted by the population? Organ procurement policies aim to increase the availability of transplantable organs. That is, efficiency in organ procurement is related to achieving a high quantity of organs for allocation. However, this efficiency should be balanced with other ends that are valuable to society, such as respect towards individuals' autonomy and their posthumous interests, and the autonomy and interests of the family [3]. Given that individual autonomy, family preferences, and collective interests may conflict with each other, ideal governance in democracy should ponder and integrate as much as possible the competing values and goods of the pluralistic society it serves. Organ donation policymaking may pursue that objective by striving for policies that can be supported by a majority, while minimally hampering the values of opposing minorities [44].

It is generally accepted that the cornerstone of transplantation ethics is respecting one's individual autonomy, as stated in the WHO Ethical Principles of Organ Donation [4]. Consequently, the altruistic model is assumed as a justification for donation policies [34]. However, these principles are based on a conception of the importance and role of the individual in North American culture. Classical bioethics has been very much centred on principlist and autonomist approaches. Other cultures may have a different conception of bioethics because they assign a different value and role to the individual, the family, the social group and society as a whole [45]. As a result, this emphasis on autonomy has been criticised in recent decades [45,46], as it has sometimes meant relegating other relevant issues to the background or focusing bioethical analysis too much on an individualistic framework. There are problems—traditionally considered bioethical—whose solution is not so much individual as collective, for example, vaccination or organ procurement. In these cases, individualistic frameworks may be limited in proposing solutions: these problems are not a set of individual situations added up numerically, but problems of a collectivity with important co-dependent links, i.e., the situation of some affects the

situation of others. Solidarity is therefore a useful category that can help us to address the problem of organ shortage from a public health perspective.

We recognise solidarity as a key principle for improving public health and health systems. Our argument is based on reinforcing the normative desirability of having an organ procurement system that is based on solidarity, namely, on the commitment that some practices need to be valued because of their impact on the community's health.

The proposal for a justification of organ donation based not only on altruism but also on solidarity could (or should) be framed in a discussion of the limits of Beauchamp and Childress' principlist model. That is, even if Beauchamp and Childress' model [37], based on individual autonomy (in addition to the other three principles) is appropriate in a given cultural context, there may also be alternative models, also based on solidarity, more appropriate in other cultural contexts.

6. Conclusions

After defining altruism and solidarity, and describing the main organ procurement models, we have analysed various models of organ procurement by comparing the altruistic justification with the solidarity justification. We have shown, on the one hand, that models of organ donation based on altruism alone may present some limitations, and, on the other hand, that solidarity is a useful ethical category to reframe organ procurement debates. According to our definition, solidarity is a concept that can be elevated to an enforceable normative criterion—as long as some conditions of legitimacy are met—since it does not depend on the motivations of individuals. These conditions of legitimacy are relative to the culture of each country, the political context, the circumstances, etc. While altruism has been used to justify—more or less satisfactorily—some models of organ procurement, we believe that solidarity might better capture the issues involved in organ procurement and sharing in large and complex societies (distinguishing between living and deceased donation).

Therefore, the public health framework may be more useful for the analysis of this type of collective problem. From a public health perspective, it is possible to de-emphasise issues related to individual autonomy and to shift attention to moral categories that are more appropriate to groups. This is the case in the shift from altruism to solidarity: solidarity allows us to assess the behaviour of social groups and public institutions, as well as to propose normative models more apt to collective problems.

Implementing a system based not only on altruism but also on collective solidarity could be a practical, reasonable, and justified guideline in the framework of social justice. Such proposals have already been put forward for other scarce biological goods (blood donations) [14]. Public organ procurement policies also based on solidarity could maximise lives saved, although this should be explored in future empirical research. In conclusion, solidarity has at least something to teach us for improving social justice in bioethics and public health policies.

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Notes

- ¹ Although we generally agree with that previous characterization, we will later object to the view that voluntariness is a requirement or component of solidarity.
- ² For arguments in favour of a state-run regulated market for organs, see Sterri, Aksel Braanen, Sadie Regmi, and John Harris. 2022. "Ethical Solutions to the Problem of Organ Shortage." *Cambridge Quarterly of Healthcare Ethics* 31 (3): 297–309. <https://doi.org/10.1017/S0963180121000955>.

References

1. Hortal-Carmona, J. *Ética de La Distribución De Recursos Sanitarios Escasos: Cuándo Las Decisiones Trágicas Son Justas*; Universidad de Granada: Granada, Spain, 2022.
2. EDQM. *Newsletter Transplant. International Figures on Donation and Transplantation 2020*; European Directorate for the Quality of Medicines and HealthCare: Strasbourg, France, 2021.
3. Molina Pérez, A.; Delgado, J.; Frunza, M.; Morgan, M.; Randhawa, G.; Reiger-Van de Wijdeven, J.; Schiks, E.; Schick Tanz, S.; Woehlke, S.; Rodríguez-Arias, D. Should the Family Have a Role in Deceased Organ Donation Decision-Making? A Systematic Review of Public Knowledge and Attitudes towards Organ Procurement Policies in Europe. *Transplant. Proc.* **2022**, *54*, 567–574. [[CrossRef](#)]
4. WHO. Sixty-Third World Health Assembly. WHO Guiding Principles on Human Cell, Tissue and Organ Transplantation. *Cell Tissue Bank* **2010**, *11*, 413–419. [[CrossRef](#)] [[PubMed](#)]
5. Gubernatis, G. Solidarity Model as Nonmonetary Incentive Could Increase Organ Donation and Justice in Organ Allocation at the Same Time. *Transplant. Proc.* **1997**, *29*, 3264–3266. [[CrossRef](#)] [[PubMed](#)]
6. Kraut, R. Altruism. In *The Stanford Encyclopedia of Philosophy (Fall 2020 Edition)*; Zalta, E.N., Ed.; Stanford University: Stanford, CA, USA, 2016.
7. May, J. Psychological Egoism. *Internet Encycl. Philos.* 2011. Available online: <https://iep.utm.edu/psychological-egoism/> (accessed on 16 June 2022).
8. Dawson, A.; Jennings, B. The Place of Solidarity in Public Health Ethics. *Public Health Rev.* **2012**, *34*, 4. [[CrossRef](#)]
9. Chadwick, R. COVID-19 and the Possibility of Solidarity. *Bioethics* **2020**, *34*, 637. [[CrossRef](#)] [[PubMed](#)]
10. Prainsack, B. The "We" in the "Me": Solidarity and Health Care in the Era of Personalized Medicine. *Sci. Technol. Hum. Values* **2018**, *43*, 21–44. [[CrossRef](#)]
11. Nuffield Council on Bioethics. *Human Bodies: Donation for Medicine and Research*; Nuffield Council on Bioethics: London, UK, 2011.
12. Dawson, A.; Verweij, M. Solidarity: A Moral Concept in Need of Clarification. *Public Health Ethics* **2012**, *5*, 1–5. [[CrossRef](#)]
13. Puyol, À. La idea de solidaridad en la ética de la salud pública. *Revista de Bioética y Derecho* **2017**, *40*, 33–47.
14. Puyol, A. Ética, solidaridad y donación de sangre. Cuatro perspectivas a debate. *Revista de Bioética y Derecho* **2019**, *45*, 43–58. [[CrossRef](#)]
15. Giubilini, A. An Argument for Compulsory Vaccination: The Taxation Analogy. *J. Appl. Philos.* **2020**, *37*, 446–466. [[CrossRef](#)] [[PubMed](#)]
16. Singer, P. Famine, Affluence, and Morality. *Philos. Public Aff.* **1972**, *1*, 229–243.
17. Singer, P. *The Life You Can Save: Acting Now to End World Poverty*; Random House: New York, NY, USA, 2009; ISBN 978-1-4000-6710-7.
18. Ash, T. Kidney Donation Is a Reasonable Choice for Effective Altruists and More Should Consider It. *Effective Altruism Forum*. 2014. Available online: <https://forum.effectivealtruism.org/posts/yTu9pa9Po4hAuhETJ/kidney-donation-is-a-reasonable-choice-for-effective> (accessed on 17 June 2022).
19. Neidich, E.M.; Neidich, A.B.; Cooper, J.T.; Bramstedt, K.A. The Ethical Complexities of Online Organ Solicitation via Donor-Patient Websites: Avoiding the "Beauty Contest". *Am. J. Transplant.* **2012**, *12*, 43–47. [[CrossRef](#)] [[PubMed](#)]
20. Morla-González, M.; Moya-Guillem, C.; Delgado, J.; Molina-Pérez, A. European and Comparative Law Study Regarding Family's Legal Role in Deceased Organ Procurement. *Rev. Gen. Derecho Público Comp.* **2021**, *29*, 1–33.
21. Zúñiga-Fajuri, A. El Consentimiento Presunto y La Reciprocidad Como Mecanismos Para Aumentar La Donación de Órganos. *Rev. Médica Chile* **2015**, *143*, 1331–1336. [[CrossRef](#)]
22. Iyer, T.K.K. Kidneys for Transplant—"Opting out" Law in Singapore. *Forensic Sci. Int.* **1987**, *35*, 131–140. [[CrossRef](#)]
23. Cronin, A. Points Mean Prizes: Priority Points, Preferential Status and Directed Organ Donation in Israel. *I. Isr. J. Health Policy Res.* **2014**, *3*, 1–4. [[CrossRef](#)] [[PubMed](#)]
24. Costa-de-Oliveira, L. Mercado regulado de órganos: El caso de Irán. *Rev. Bioética Y Derecho* **2018**, *44*, 73–88.
25. Moya Guillem, C.; Rodríguez-Arias, D.; Morla González, M.; de Miguel Beriain, Í.; Molina Pérez, A.; Ortega Deballon, I. La Confiscación de Órganos a La Luz Del Derecho Constitucional a La Protección de La Salud. *Rev. Española Derecho Const.* **2021**, *122*, 183–213. [[CrossRef](#)]
26. Singer, P.; Gates, B.M. *Famine, Affluence, and Morality*; Oxford University Press: Oxford, UK, 2016; ISBN 978-0-19-021920-8.

27. Singer, P. Why You Should Donate a Kidney to a Stranger, Why You Should Donate a Kidney to a Stranger. 2017. Available online: <https://www.insider.com> (accessed on 15 June 2022).
28. Tonkens, R. Effective Altruists Ought to Be Allowed to Sell Their Kidneys. *Bioethics* **2018**, *32*, 147–154. [[CrossRef](#)] [[PubMed](#)]
29. McMahan, J. Philosophical Critiques of Effective Altruism. *Philos. Mag.* **2016**, *73*, 92–99. [[CrossRef](#)]
30. Biller-Andorno, N. Between Solidarity and Self-Interest: How Fair Is the “Club Model” for Organ Donation? *Am. J. Bioeth.* **2004**, *4*, 19–20. [[CrossRef](#)] [[PubMed](#)]
31. Schicktanz, S.; Pfaller, L.; Hansen, S.L.; Boos, M. Attitudes towards Brain Death and Conceptions of the Body in Relation to Willingness or Reluctance to Donate: Results of a Student Survey before and after the German Transplantation Scandals and Legal Changes. *J. Public Health* **2017**, *25*, 249–256. [[CrossRef](#)]
32. Scheper-Hughes, N. The Tyranny of the Gift: Sacrificial Violence in Living Donor Transplants. *Am. J. Transplant.* **2007**, *7*, 507–511. [[CrossRef](#)] [[PubMed](#)]
33. Wöhlke, S.; Schweda, M. Gender Issues in Living Organ Donation: Medical, Social and Ethical Aspects. In *Sex and Gender in Biomedicine: Theories, Methodologies, Results*; Klinge, I., Wiesemann, C., Eds.; Universitätsverlag Göttingen: Göttingen, Germany, 2010; pp. 33–55.
34. Saunders, B. Opt-out Organ Donation without Presumptions. *J. Med. Ethics* **2012**, *38*, 69–72. [[CrossRef](#)] [[PubMed](#)]
35. Diaz-Cobacho, G.; Cruz-Piqueras, M.; Delgado, J.; Hortal-Carmona, J.; Martinez-Lopez, M.V.; Molina-Perez, A.; Padilla-Pozo, A.; Ranchal-Romero, J.; Rodriguez-Arias, D. Public Perception of Organ Donation and Transplantation Policies in Southern Spain. *medRxiv* **2021**. [[CrossRef](#)] [[PubMed](#)]
36. Molina-Pérez, A.; Rodríguez-Arias, D.; Delgado-Rodríguez, J.; Morgan, M.; Frunza, M.; Randhawa, G.; Reiger-Van de Wijdeven, J.; Schiks, E.; Wöhlke, S.; Schicktanz, S. Public Knowledge and Attitudes towards Consent Policies for Organ Donation in Europe: A Systematic Review. *Transpl. Rev.* **2019**, *33*, 1–8. [[CrossRef](#)] [[PubMed](#)]
37. Beauchamp, T.L.; Childress, J.F. *Principles of Biomedical Ethics*, 5th ed.; Oxford University Press: Oxford, UK, 2001; ISBN 978-0-19-514331-7.
38. Saunders, B. Normative Consent and Opt-out Organ Donation. *J. Med. Ethics* **2010**, *36*, 84–87. [[CrossRef](#)] [[PubMed](#)]
39. Comité Consultatif National D'éthique Pour les Sciences de la vie et de la Santé (CCNE). Questions d'éthique Relatives Au Prélèvement et Au Don d'organes à Des Fins de Transplantation Avis No. 115 2011. Available online: https://www.ccne-ethique.fr/sites/default/files/2021-02/avis_115.pdf (accessed on 16 June 2022).
40. Gubernatis, G.; Kliemt, H. A Superior Approach to Organ Allocation and Donation. *Transplantation* **2000**, *70*, 699–702. [[CrossRef](#)] [[PubMed](#)]
41. Moorlock, G.; Ives, J.; Draper, H. Altruism in Organ Donation: An Unnecessary Requirement? *J. Med. Ethics* **2014**, *40*, 134–138. [[CrossRef](#)] [[PubMed](#)]
42. Guttman, N.; Siegal, G.; Appel, N.; Bar-On, G. Should Altruism, Solidarity, or Reciprocity Be Used as Prosocial Appeals? Contrasting Conceptions of Members of the General Public and Medical Professionals Regarding Promoting Organ Donation. *J. Commun.* **2016**, *66*, 909–936. [[CrossRef](#)]
43. Dopelt, K.; Siton, L.; Harrison, T.; Davidovitch, N. Revisiting the Relationship between Altruism and Organ Donation: Insights from Israel. *Int. J. Environ. Res. Public Health* **2022**, *19*, 7404. [[CrossRef](#)] [[PubMed](#)]
44. Rodríguez-Arias, D.; Molina-Pérez, A.; Hannikainen, I.R.; Delgado, J.; Söchtig, B.; Wöhlke, S.; Schicktanz, S. Governance Quality Indicators for Organ Procurement Policies. *PLoS ONE* **2021**, *16*, e0252686. [[CrossRef](#)] [[PubMed](#)]
45. Dickenson, D.L. Cross-Cultural Issues in European Bioethics. *Bioethics* **1999**, *13*, 249–255. [[CrossRef](#)] [[PubMed](#)]
46. Diniz, D. Bioethics And Culture. *Bioethics* **2010**, *10*, 2–3. [[CrossRef](#)] [[PubMed](#)]