A critique of national solidarity in transnational organ sharing in Europe

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ABSTRACT

In this article, I critically examine the principle of national solidarity in organ sharing across national borders. More specifically, I analyse the policy foundations of solidarity in the transnational allocation of organs and its implementation in the system of national balance points adopted in Europe. I argue that the system of national balance points is based on statist collectivism and therefore is oriented more toward collective, rather than individual welfare. The same collectivist welfare rationale is also evident from leading policy statements about self-sufficiency in organ donation that seem to assume that cross-border organ sharing can be wrong if collective welfare is violated. This collectivist system of organ sharing can produce unjust results to individual candidates for organ transplantation. I propose several measures to reform the existing solidarity-based framework for the procurement and allocation of organs in order to balance the collective and the individual welfare of the donors and recipients of organs. I also discuss the implications of adopting that proposal.

KEYWORDS: organ transplantation, national solidarity, collectivism, individual welfare, Eurotransplant, Scanditransplant

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I. INTRODUCTION

In this article, I critically examine the principle of national solidarity in organ sharing across national borders. More specifically, I analyse the policy foundations of national solidarity in the transnational allocation of organs and its implementation in the system of national balance points adopted in Europe. Under the system of national balance points, which is applied in transnational cooperation on organ transplantation, a difference between organs procured and organs transplanted is calculated for each country participating in the transnational organ exchange arrangements, after which all recipients in that country are assigned national balance points that go into their organ allocation scores. I argue that the system of national balance points is based on statist collectivism and therefore is oriented more toward collective, rather than individual welfare. The same collective welfare rationale is also evident from leading policy statements about self-sufficiency in organ donation that seem to assume that cross-border organ sharing can be wrong if collective welfare is violated. This collectivist rationale of organ sharing, epitomized in the system of national balance points, can produce unjust results to individual candidates for organ transplantation. While the system of transnational sharing of organs is generally laudable as it serves the important purposes of saving lives of individual recipients of organs who cannot find the match in their home countries and providing optimal outcomes of matching organs, the statist element of that system deserves a closer critical scrutiny. I propose several measures to reform the existing national solidarity-based framework for the procurement and allocation of organs to orient it toward individual welfare of the donors and recipients of organs. I also discuss the implications of adopting that proposal.

While there is a growing wealth of literature on organ transplantation, including organ procurement and allocation, this article will make a novel and practical contribution to the fields of bioethics, health law, and public policy. First, while the issues of allocation of organs within one country have been extensively studied in the literature, the topic of international cooperation on the allocation of organs has received much less attention.

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1 National solidarity, which is the principle of solidarity applied within one state, is different from international, or global solidarity, which Benatar, Daar, and Singer define as ‘attitudes and determination to work for the common good across the globe’. Solomon Benatar, Abdallah S. Daar, & Peter A. Singer, Global Health Ethics: The Rationale for Mutual Caring, in GLOBAL HEALTH AND GLOBAL HEALTH ETHICS 129, 130 (Solomon Benatar & Gillian Brock ed., 2011) (emphasis added). In this article, my main focus is on the idea of national solidarity.

2 Eurotransplant Foundation, Eurotransplant Manual, Chapter 4 Kidney (ETKAS and ESP) (version 5.2., 2016), at 21, https://www.eurotransplant.org/cms/mediaobject.php?file=H4+ETKAS+November+11%2C+20161.pdf (accessed Dec. 9, 2017).

3 Participants in the International Summit on Transplant Tourism and Organ Trafficking convened by The Transplantation Society and the International Society of Nephrology in Istanbul, Turkey, 30 Apr. to 2 May 2008, The Declaration of Istanbul on Organ Trafficking and Transplant Tourism (2008), principle 5 (‘Jurisdictions, countries and regions should strive to achieve self-sufficiency in organ donation by providing a sufficient number of organs for residents in need from within the country or through regional cooperation.’), http://multivu.prnewswire.com/mnr/transplantationsociety/33914/docs/33914-Declaration_of_Istanbul-Lancet.pdf (accessed Dec. 9, 2017).

4 For book-length treatments of this issue, see eg ROBERT M. VEATCH, TRANSPLANTATION ETHICS (2002); NORA MACHADO, USING THE BODIES OF THE DEAD: LEGAL, ETHICAL AND ORGANIZATIONAL DIMENSIONS OF ORGAN TRANSPLANTATION (1998). For scholarly articles on the issues of the procurement and allocation of organs, see eg 77 L. & CONTEMP. PROBS. no. 3, 2014 (a collection of law review articles on the topic ‘Organs and Inducements’).
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attention from legal scholars and bioethicists. The same is true about solidarity: while that concept has received some attention as applied to health care law and policy, its application to the transnational sharing of organs is studied much less well. At the same time, the principle of solidarity and the system of national balance points it entails affect thousands of transplant candidates. This article narrows the gap in the literature by analysing the conceptual grounds of solidarity as a principle of organ allocation and examining the system of national balance points as an implementation of that principle. Second, the article argues that the system of national balance points is grounded in collective welfare, and as such can disregard the welfare of individual candidates for organ transplantation. This criticism adds a different perspective to the existing literature praising the system of national balance points. Third, the article builds on its conceptual analysis to propose a more balanced framework for international cooperation in the procurement and allocation of organs, one that is more charitable to the welfare of individual patients. In sum, the article both analyses the system of international cooperation in organ transplantation, including the system of national balance points, from a new angle, and suggests practical ways in which the system can be changed.

The argument of the article unfolds as follows. In the first part, I provide a brief descriptive analysis of solidarity as a general principle of law and then focus on how it applies to organ transplantation. Specifically, I examine the primary sources of law enshrining the idea of solidarity, especially in the procurement and allocation of organs, and then analyse their policy grounds. My attention is primarily focused on Europe, because in that region the principle of solidarity gained high international prominence in such organizations as the European Union, the Council of Europe, and Eurotransplant. In the second part, I give a normative analysis of solidarity implemented in Eurotransplant via the system of national balance points. Specifically, I analyse whether solidarity and the system of national balance points can be justified under the ideas of global justice and conclude that only one such theory conditionally supports them.

5 For notable exceptions, see I. Glenn Cohen, Organs without Borders? Allocating Transplant Organs, Foreigners, and the Importance of the Nation-State (?), 77 L. & CONTEMP. PROBS. 175, no. 3 (2014); Nora Machado, Using the Bodies of the Dead: Legal, Ethical and Organizational Dimensions of Organ Transplantation 67 (1998) (briefly discussing Eurotransplant and its allocation policies); Sjef Gevers, A Fair Distribution of Organs for Transplantation Purposes: Looking to the Past and the Future, 14 EUR. J. HEALTH L. 215 (2007) (discussing the principles of solidarity, reciprocity, efficiency, and justice in organ allocation); Kiran Sheffrin, Establishing an International Organ Exchange through the General Agreement on Trade in Services, 38 BROOK. J. INT’L L. 829 (2013) (justifying the proposal to establish an international organ exchange under the principles of individual and collective welfare and reciprocity).

6 See eg Vassilis Hatzopoulos, Health Law and Policy: The Impact of the EU, in EU LAW AND THE WELFARE STATE: IN SEARCH OF SOLIDARITY 111 (Gráinne de Búrca ed., 2005); Shawn H. E. Harmon, Solidarity: A (New) Ethic for Global Health Policy, 14 HEALTHCARE ANALYSIS 215 (2006).

7 For a critique of national solidarity, see Gert Mayer & Guido G. Persijn, Eurotransplant Kidney Allocation System (ETKAS): Rationale and Implementation, 21 NEPHROL. DIAL. TRANSPL. 2 (2005); Thomas Wujciak & Gerhard Opelz, A Proposal for Improved Kidney Allocation, 56 TRANSPLANTATION 1513 (1993).

The critique of national solidarity voiced in this article can also apply to other regions and countries, such as North America and the USA and Canada, respectively. The topics of how the idea of national solidarity applies to the distribution of organ transplants within the USA and among the USA and Canada will be examined in a separate article.
also argue that the functioning of solidarity in transnational organ sharing depends on three fictions that flow from the policy foundations of national solidarity analysed in the first part and serve the purposes of collective welfare and therefore can disregard the individual welfare of candidates for organ transplantation. This gives a sound normative reason, independent of theories of global justice, to reform solidarity, especially in light of international instruments, where individual welfare of the donors and recipients of organs is declared as the primary value. In the third part, I examine alternative frameworks for the transnational procurement and allocation of organs that would be more faithful to the individual welfare of the donors and recipients of organs. I begin by examining the ‘payback’ system adopted in Scandiatransplant and conclude that it is also based on collective welfare. I then propose a framework for transnational sharing of organs, which is centered on the welfare of individual donors and recipients and more fully complies with the international ethical norms of organ transplantation. I also discuss some of the implications of that alternative framework, including market mechanisms for the procurement and allocation of organs, judicial review of organ allocation decisions, and deeper integration and cooperation in transnational organ sharing. The conclusion briefly summarizes the article’s argument.

II. SOLIDARITY IN ORGAN TRANSPLANTATION: A DESCRIPTIVE ACCOUNT

In this part of the article, I first give a descriptive account of solidarity as a legal concept in national and international law, and then analyse the policy foundations of solidarity in transnational organ sharing in Europe. Since the focus of this section is on solidarity as a legal conception as applied to organ sharing, I do not spend much time on discussing the general idea of solidarity in political and moral philosophy except where such discussion is relevant to the topic of this part.  

A. Solidarity in legal norms

‘Solidarity’ is a term of many meanings, which change depending on the area of law where the term is found. In the USA, for example, solidarity in contract law means that in a situation of ‘one obligation, shared by several debtors ... the interruption of prescription against one defendant also interrupts the prescription of claims against any other defendants who are solidarily liable with the first.’ In labor law, some commentators have interpreted solidarity as a unity of interests of employees who are

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10 For book-length treatments of solidarity as an idea in political philosophy, see eg PROMOTING SOLIDARITY IN THE EUROPEAN UNION (Malcolm Ross & Yuri Borgmann-Prebisl eds., 2010); EU LAW AND THE WELFARE STATE: IN SEARCH OF SOLIDARITY (Grainne de Burca ed., 2005); STEINAR STJERNø, SOLIDARITY IN EUROPE: THE HISTORY OF AN IDEA (2005). While the general idea of solidarity can be difficult to pin down in a concise definition because the term has different meanings depending on the areas of law it is applied, the idea of solidarity I want to explore in this article can be generally formulated as follows: solidarity is the principle, according to which scarce resources are distributed among the members of a certain community based on the idea of reciprocity. The next two sections of this part develop and defend this interpretation in more detail.

11 Rodriguez v. Suzuki Motor Corp., 570 F.3d 402, 410 (1st Cir. 2009), citing Tokyo Marine & Fire Ins. Co. v. Perez & Cia., De Puerto Rico, Inc., 142 F.3d 1, 4, 6 (1st Cir. 1998). The cited rule stands for the proposition that in a situation where there are multiple (eg two) debtors and one creditor, filing a claim against one debtor within the statute of limitations automatically includes the second debtor into the action as well, even if the subsequent claim against that second debtor was filed later than the law allows. (Absent the doctrine of solidarity, the claim against the second debtor would be prescribed by the statute of limitations.)
represented by their labor union,\textsuperscript{12} while others specified that solidarity stands for ‘a willingness to forego short-term individual gain in the interests of realizing long-term collective gain’.\textsuperscript{13} In family law, commentators suggest that marital solidarity answers the question about ‘the boundaries of the responsibilities of individual family members to each other and what are the limits of the responsibility of the state’.\textsuperscript{14} A notable characteristic of these interpretations of solidarity given by courts and commentators is their connection with the ideas of distributive justice, be it the distribution of liability among the debtors under the contract law, or the distribution of benefits and burdens among the collective of employees and its individual members, or the distribution of responsibilities among the members of the family and the government.

Solidarity can be found not only in US law, in fact, the region of the world where that idea has gained perhaps the highest international prominence is Europe. Solidarity is one of the founding principles of the European Union mentioned in the constituting treaties of that supranational organization.\textsuperscript{15} The principle of solidarity permeates many areas of EU law,\textsuperscript{16} including, \textit{inter alia}, health law, where it manifests itself in universal healthcare coverage and, more specifically, in income-dependent contributions to the healthcare system, mandatory affiliation with the system (it is generally not possible to opt out the system of health insurance), and progressive coverage according to the needs of individual patients.\textsuperscript{17} These features of solidarity in health law strongly indicate the connection between the ideas of solidarity and distributive justice. This connection is further evident from the doctrine of solidarity developed by the European Court of Justice, who stated that ‘[s]olidarity entails the redistribution of income between those who are better off and those who, in view of their resources and state of health, would be deprived of the necessary social cover’.\textsuperscript{18} Finally, several commentators grounded solidarity in the idea of reciprocity,\textsuperscript{19} which also suggests its distributive orientation.

\textsuperscript{12} George Feldman, \textit{Unions, Solidarity, and Class: The Limits of Liberal Labor Law}, 15 BERKELEY J. EMP. & LAB. L. 201 (1994) (‘[S]olidarity among workers, widely understood, rather than among employees of a particular employer (or even employees within a particular industry)[…] demands a broad view of the size and scope of the group whose interests are relevant. A union that seeks to speak for its retired members (to “represent” them—or to lead, protect, or mobilize them) has a broader view of its role than do courts that find the community of interests between the two groups insufficient.’).

\textsuperscript{13} Stephen Lee, \textit{Screening for Solidarity}, 80 U. CHI. L. REV. 225, 227 (2013).

\textsuperscript{14} Sanford N. Katz, \textit{Family Solidarity Versus Social Solidarity}, 1 INT’L J. JURISPRUDENCE FAM. 163, 163 (2010).

\textsuperscript{15} Treaty of Lisbon Amending the Treaty on European Union and the Treaty Establishing the European Community art. 1a, Dec. 13, 2007, 2007 O.J. (C306) 11 (‘[The values on which the Union is founded] are common to the Member States in a society in which pluralism, non-discrimination, tolerance, justice, solidarity and equality between women and men prevail.’); see also Single European Act pmbl., Feb. 28, 1986, 1987 O.J. (L 169) 2 (noting ‘the responsibility incumbent upon Europe … to act with consistency and solidarity in order more effectively to protect its common interests and independence, …’).

\textsuperscript{16} See eg Esin Küçük, \textit{Solidarity in EU Law: An Elusive Political Statement or a Legal Principle with Substance?}, 6 MAASTRICHT J. EUR. & COMP. L. 965, 966 (2016) (arguing that ‘[solidarity] has been widely used throughout EU legislation, at both the primary and secondary level. It has acquired an increasingly prominent place within the constitutional system of the EU legal order.’).

\textsuperscript{17} Vassilis Hatzopoulos, \textit{Health Law and Policy: The Impact of the EU, in EU LAW AND THE WELFARE STATE: IN SEARCH OF SOLIDARITY} 111, 118 (Gráinne de Búrca ed., 2005).

\textsuperscript{18} Joined Cases C-159 and C-160/91, Christian Poucet v. Assurances Générales de France (AGF) and Caisse Mutuelle Régionale du Languedoc-Roussillon (Camurac), Daniel Pistre v. Caisse Autonome Nationale de Compensation de l’Assurance Vieillesse des Artisans (Cancava), 1993 E.C.R. I-668.

\textsuperscript{19} See eg Andrea Sangiovanni, \textit{Solidarity in the European Union}, 33 OXFORD J. LEGAL STUD. 213, 217 (2013) (‘According to reciprocity-based internationalism, demands for social solidarity at all levels of governance
What emerges from these provisions of EU law is the vision of a community (national or international, as discussed in more detail below) of interdependent individuals who enter into reciprocal relationships with respect to certain scarce resources that must be distributed among them in accordance with the principle of national or international solidarity.20 It is against this regulatory and conceptual background that the principle of solidarity was applied to transnational organ sharing in Europe. Solidarity in transnational organ sharing21 was officially recognized in several international documents, including the Additional Protocol to the Convention on Human Rights and Biomedicine concerning Transplantation of Organs and Tissues of Human Origin,22 the Eurotransplant Manual,23 and the Ethical Charter for Eurotransplant International Foundation.24

The Additional Protocol, in pertinent part, states, ‘In case of international organ exchange arrangements, the procedures must ... ensure justified, effective distribution across the participating countries in a manner that takes into account the solidarity principle within each country’.25 This provision of the Additional Protocol, approving the national interpretation of solidarity principle, is echoed in two documents adopted by Eurotransplant—a supranational organ exchange organization in Europe, which unites private transplant centers, donor hospitals, and tissue laboratories in its member states26 and uses centralized waiting lists for organs.27 Thus, the Eurotransplant Manual states that ‘justified, genuine distribution across the participating countries in a manner that takes account of the solidarity principle within each country’ must be ensured.28

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20 See generally Wolfram Lamping, Mission Impossible? Limits and Perils of Institutionalizing Post-National Social Policy, in PROMOTING SOLIDARITY IN THE EUROPEAN UNION 46, 47 (Malcolm Ross and Yuri Borgmann-Prebil eds., 2010) (arguing that in the context of solidarity ‘(re)distribution matters: while the (regulatory) social policy regime of the EU is certainly considerable, especially in the “periphery” of welfare states, national solidarity communities are still intact. National borders are the boundaries of distribution and redistribution as well as public/social services which are at the heart of national welfare statehood.’).

21 From now on, I shall use the terms ‘solidarity in transnational organ sharing’, ‘solidarity’, and ‘national solidarity’ interchangeably, unless specified otherwise.

22 Additional Protocol to the Convention on Human Rights and Biomedicine Concerning Transplantation of Organs and Tissues of Human Origin art. 2, Jan. 24, 2002, 186 Eur. T.S., https://www.coe.int/en/web/conventions/full-list/-/conventions/rms/0900001680081562 (accessed Dec. 9, 2017) (Additional Protocol).

23 Eurotransplant Foundation, Eurotransplant Manual, https://www.eurotransplant.org/cms/index.php?page=et_manual (accessed Dec. 9, 2017)

24 Eurotransplant, Ethical Charter for Eurotransplant International Foundation (May 30, 2011), http://www.eurotransplant.org/cms/mediaobject.php?file=ET-Ethical-Charter.pdf (accessed Dec. 9, 2017) (Ethical Charter).

25 Additional Protocol art. 3 (emphasis added).

26 For more information about Eurotransplant and its history, see generally Eurotransplant Foundation, Eurotransplant Manual, Chapter 1 Introduction (version 5.5, 2016), https://www.eurotransplant.org/cms/mediaobject.php?file=H1+Introduction+July+28+20161.pdf (accessed Dec. 9, 2017). As of August 2017, the member states of Eurotransplant are Austria, Belgium, Croatia, Germany, Hungary, Luxembourg, the Netherlands, and Slovenia.

27 Id.

28 Eurotransplant Foundation, Eurotransplant Manual Chapter 1 Introduction, at 18.
The Ethical Charter of Eurotransplant further specifies that the solidarity principle is ‘to be implemented through a mutually agreed balancing system’.  

For kidneys, such a balancing system has been adopted in Eurotransplant since 1996. It is based on the Wujciak—Opelz model proposed in 1993. In their seminal article, Wujciak and Opelz, using computer simulations, suggested that the system of procurement and allocation of cadaveric kidneys in Europe could be improved by factoring the ‘exchange balance’ into the overall kidney allocation score (a score assigned to a candidate for kidney transplantation that determines the candidate’s position on a waiting list). Wujciak and Opelz proposed to calculate the exchange balance as ‘the value of exported minus imported donor kidneys in the recipient center within the year prior to the transplant’ and then ‘transpose[] [the value] into a point system of 0 to 100’. According to Wujciak and Opelz, the inclusion of the exchange balance score into the kidney allocation score would ‘support the local procurement effort’. At the same time, they acknowledged that their proposal would work only for transplantation centers where ‘the number of donors ... [was] proportionate to the waiting list size’.

In Eurotransplant, the ‘mutually agreed balancing system’ is the system of national balance points, which closely follows the Wujciak and Opelz model for the allocation of cadaveric kidneys and works as follows:

National Kidney Exchange Balance

Once every day, for the period of the immediate previous 365 days, the difference between the number of kidneys procured, exchanged between each [Eurotransplant] country and transplanted, is calculated.

Export, i.e. a negative balance, is defined as:

kidneys procured in a country > kidneys transplanted in that country.

Import, i.e. a positive balance, is defined as:

kidneys procured in a country < kidneys transplanted in that country.

The point assignment depends on the range of national balance values and is assigned only to resident recipients.

National Balance Points = (highest import balance—recipient country balance) × 10.

It is easy to see that the system rewards the residents of the countries with export balance: the negative value of export is subtracted from (ie its absolute value is added to) the highest import balance value, thereby increasing the national balance points and the overall kidney allocation score for those resident recipients. By contrast, the system

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29 Ethical Charter at 3.
30 As there are some differences between the allocation criteria for different organs, I shall focus my analysis on the allocation of kidneys throughout the rest of this piece.
31 Mayer & Persijn, supra note 8, at 3.
32 T. Wujciak & Gerhard Opelz, A Proposal for Improved Cadaver Kidney Allocation, 56 TRANSPL. 1513–17 (1993). For an example of how this system works when implemented, see infra notes 132–134 and accompanying text.
33 Id. at 1514.
34 Id.
35 Id.
36 Id. at 1513.
37 Id. at 1515.
38 Eurotransplant Foundation, Eurotransplant Manual, Chapter 4 Kidney (ETKAS and ESP) (version 5.2., 2016), at 21.
disadvantages the resident recipients in the countries with import balance. The effect of national balance points on the overall kidney allocation score can be quite significant: according to the literature, it was possible for some countries to have a negative balance of 57, while some countries had a positive balance of 136. \(^{39}\) Multiplied by 10, those values result in weighty numbers, comparable to other values factoring into the overall kidney allocation score (eg the score for HLA mismatches). \(^{40}\)

The idea of solidarity arguably finds yet another—international—manifestation in Eurotransplant: the preferential treatment of residents of Eurotransplant member states compared to non-residents. \(^{41}\) Eurotransplant has distanced itself from making binding decisions on whether its member states can engage in non-resident transplantation and leaves that question for their national governments to decide. \(^{42}\) At the same time, Eurotransplant does express concerns that ‘non-resident transplantation… might influence the social acceptance of donation of organs and transplantation in general [which] could endanger the willingness to donate organs’. \(^{43}\) Eurotransplant also underscores the value of reciprocity in non-resident transplantation: as the Manual of the organization specifies, Eurotransplant may enter into agreement on organ exchange with non-member states, and such ‘agreements … [must be] based on reciprocity regarding organ donation and transplantation between the [Eurotransplant] and the non-[Eurotransplant] center, region or country and as such do not undermine the ability of the [Eurotransplant] countries to provide transplant services to its own population’. \(^{44}\) All these provisions clearly signal that Eurotransplant treats itself as a community, in which solidarity obtains in the relations among its members, but not in the relations between members and ‘strangers’ (ie non-residents, foreign countries, or transplantation centers).

Since this international (or European) aspect of solidarity is not governed by the Eurotransplant rules, I shall leave it aside and instead focus on the national solidarity that obtains among the members of Eurotransplant: the system of national balance points. Given the significance of that system in the transnational allocation of organs, it is important to clarify its policy foundations. This is the issue to which I now turn.

**B. The policy foundations of national solidarity**

In this section, I analyse the policy foundations of the ‘solidarity principle within each country’, which is a part of a general system of transnational sharing of organs in Europe. I begin by listing several interrelated aspects of solidarity. Then I trace the policy foundations of those aspects using the inductive method (ie I induce broader policy assumptions that underlie the specific features of solidarity). In the end of the section,

\(^{39}\) Mayer & Persijn, supra note 8, at 3 (‘Prior to the initiation of ETKAS in March 1996, Austria had a negative balance of 25 kidneys, Belgium and Luxemburg of 57 and the Netherlands of 42. Germany on the contrary had a positive balance of 136. On 11 March 2005, the corresponding numbers were only +6, −2, +4, and +11, respectively.’). For a different example of how the system of national balance points works, see infra note 131 and accompanying text.

\(^{40}\) Eurotransplant Foundation, Eurotransplant Manual, Chapter 4 Kidney (ETKAS and ESP) (version 5.2., 2016), at 18.

\(^{41}\) Eurotransplant Foundation, Eurotransplant Manual, Chapter 2 The Recipient (version 4.0, 2013), at 11-14.

\(^{42}\) Id. at 12.

\(^{43}\) Id. at 11.

\(^{44}\) Id. at 14.
I briefly summarize my findings. It is important to underscore that my argument here, while being about the policy basis of solidarity, is not normative. In this section, I seek to reconstruct solidarity from its basic moral premises without making an ethical assessment of that principle (which will be the subject of the next part of this article).

Solidarity in Europe has several interrelated aspects, which we can think of as the layers of the principle’s meaning. First and perhaps most obviously, it appears to be a principle of *distribution* of a scarce resource (organs), which operates by establishing a certain ranking, or priority, among transplantation candidates by weighing in as a component in their kidney allocation scores. Second, solidarity establishes such priority for the members of certain *communities* (the residents of the countries where people donate more or less organs and whose export rate is higher or lower, respectively). Third, solidarity is based on *reciprocity* at the level of the populations of member states: the more kidneys the population of a country donates, the more national balance points the population of the country gets.

Where do all these characteristics of solidarity come from? The *distributive* character of solidarity as a priority principle is determined by the scarcity of transplantable human organs, which requires principles for allocating that scarce resource. That scarcity comes, on the one hand, from the individual choices of donors and their family members to donate fewer organs than required for transplantation, and on the other hand, from the policy choice of the governments to respect the bodily integrity of the residents of their countries and the will of the family members of deceased residents.

In that situation, it is rational for the government to decrease the scarcity of organs. The most radical measure to do so would be to abandon the current policies that put the bodily integrity of the donors above the lives of recipients and to establish a system of mandatory organ takings. For example, the government could organize an annual national lottery based on the demand for organ transplants among the entire population of the country. The ‘winners’ of the lottery would be conscripted into mandatory taking of their organs or their parts. At the same time, the living donors could be guaranteed that should their organs fail the government would provide them with transplants procured under the same lottery. The lottery could be designed in such a way that the chances of ‘winning’ it and being conscripted into mandatory organ taking would not be higher than a chance of a natural failure of the organ that is being taken, so statistically the participants would not be worse off. I want to stress that I do not approve of such a lottery. The example is here only to demonstrate that the government has regulatory tools to increase the supply of organs and eliminate their scarcity, which it cannot do to genuinely scarce resources, such as rare earth elements.

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45 On solidarity as a priority principle of distribution, see eg Gundolf Gubernatis, *Solidarity Model as Nonmonetary Incentive Could Increase Organ Donation and Justice in Organ Allocation at the Same Time*, 29 TRANSPL. PROC. 3264 (1997); Jennifer A. Chandler, *Priority Systems in the Allocation of Organs for Transplant: Should We Reward Those Who Have Previously Agreed to Donate?*, 13 HEALTH L. J. 99 (2005).

46 See generally JOHN RAWLS, A THEORY OF JUSTICE 110 (rev. ed. 1999) (describing as one of the circumstances of justice ‘the condition of moderate scarcity understood to cover a wide range of situations. Natural and other resources are not so abundant that schemes of cooperation become superfluous, nor are conditions so harsh that fruitful ventures must inevitably break down.’).

47 See generally CÉCILE FABRE, WHOSE BODY IS IT ANYWAY?: JUSTICE AND THE INTEGRITY OF THE PERSON (2006).
While this radical measure, subject to certain caveats, has been viewed positively by some authors, it is highly unlikely that it will be accepted in the foreseeable future, for a number of reasons. From a cynical perspective, as long as the number of patients who die without a transplant is minor compared to the country’s overall population, it is relatively safe for the politicians to ignore the demands of those patients. From an idealist perspective, mandatory takings of organs will violate the human dignity of the country’s residents. Regardless of the perspective one might want to take, mandating organ taking from cadaveric or living donors seems to be politically and practically unfeasible.

This leaves the government that wants to eliminate or decrease the scarcity of organs with less radical methods to do so. The governments around the world have been implementing those measures with varying degrees of success, from increasing awareness about organ donation and educating the families about organ transplantation to offering various monetary and non-monetary incentives to donors and their families to increasing local donations. Solidarity as a priority principle of distribution of scarce organs and the corresponding system of national balance points seeks to foster the last method by assigning higher allocation scores to the residents of the countries where donation rates are higher. This brings us to the second aspect or layer of solidarity: community.

The communitarian aspect of solidarity heavily relies on a statist understanding of community. In other words, for purposes of the organ procurement goals, solidarity is meant to imply a community understood as a country. It is the membership in that community that animates the priority rules spelled out in the system of national balance points: if one is a resident of an organ−exporting country, then one’s score of

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48 See eg Id. at 79 (discussing ‘good grounds to confer on the “medically poor” a right to the organs of the “medically rich”, to wit, of those who, being dead, no longer need their organs.’). While Fabre stresses that her justification of confiscations of cadaveric organs is ‘individualistic’, as opposed to ‘invoking the rights of the community and the state over individuals and their body’, Id., that does not make a difference for my present argument, as long as the ‘individualistic’ justification of mandatory organ takings is backed up by the coercive force of the government and as such constitutes public policy. Fabre also specifies that individuals can claim conscientious objection-based exemption from a duty to provide their cadaveric organs to the sick. Id. at 85.

49 One might also say that from an idealist perspective mandatory organ takings would violate the social contract between the citizens and their sovereign, as citizens’ bodily integrity is one of the basic terms of that contract. I would be hesitant to accept that view, however, for it fails to explain both why the government cannot mandate organ takings from the living noncitizen residents of its country and why the government cannot mandate takings of organs from cadaveric donors. Human dignity is broader than social contract as a justification for individual rights, and therefore fits the argument against the confiscations of organs better.

50 See, for example, European Parliament and Council Directive 2010/45/EU, on Standards of Quality and Safety of Human Organs Intended for Transplantation, 2010 O.J. (L207) 16 (‘In addition, by means of its Action plan on Organ Donation and Transplantation the Commission aims to increase public awareness of organ donation and in particular to develop mechanisms to facilitate the identification of organ donors across Europe.’).

51 See eg Alexander M. Capron, Six Decades of Organ Donation and the Challenges That Shifting the United States to a Market System Would Create around the World, 77 L. & CONTEMP. PROBS. 65–66, no. 3 (2014) (discussing pilot regulations in some Chinese provinces where in 2010 financial incentives in the form of social support were offered to the families of cadaveric organ donors by the Red Cross Society of China funded by the Chinese government). See also Xiaoliang Wu & Qiang Fang, Financial Compensation for Deceased Organ Donation in China, 39 J. MED. ETHICS 378 (2013).

52 Wujciak & Opelz, supra note 32, at 1513 (‘It is much more effective to support the local procurement effort by considering the exchange balance of shared kidneys for each center in the allocation routine.’) (emphasis in original).
national balance points will be higher. By contrast, Eurotransplant as a group of countries is not a community under the system of national balance points: being a resident of the Eurotransplant's territory does not *per se* increase or decrease one’s national balance points (while being a resident of a Eurotransplant member state does).^{53}

Why is the understanding of community for the purposes of solidarity statist?^{54} One response could be that this is because organs are considered a ‘national resource’,^{55} and therefore the community that has access to that resource must be determined based on its national affiliation. This reasoning, however, looks unavailing, as it begs the question of why we should consider organs procured from the residents of the country as a ‘national resource’ of that country. It seems that the best response is that organs are a ‘national resource’ because they belong to the national community, at which point the reasoning becomes circular. Furthermore, the fact that people are free to travel with their organs and can refuse to donate them also undermines the claim that organs can be considered a ‘national resource’.^{56}

Likewise unpersuasive is the suggestion that a statist understanding of community is motivated by the nature of the doctor–patient relationship. Under that suggestion, the doctors want and have a moral duty to care about their patients and therefore vehemently oppose sharing organs with the patients of other clinicians with whom they have no doctor–patient relationship. On the one hand, this appears to be a good reason for a parochial understanding of community in the context of relations between transplantation centers within the same country. In the situation of the exchange of organs between transplantation centers, the clinicians, as one commentator observed, are ‘not able to concentrate on “their own” patients’ and see that as a drawback of the organ exchange system.^{57} But on the other hand, extending this reasoning to the whole country would mean that the doctors in that country treat all resident patients as ‘their own’ patients, which is an unrealistic assumption that flies in the face of the evidence collected by authors.^{58}

More plausible explanations of adopting a statist view on the community for solidarity purposes lie with consequentialist concerns about increasing local donations and the costs of procuring organs, as well as concerns about legitimacy. First, solidarity was adopted as a principle of organ allocation in order to strengthen local donations, which

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^{53} The fact that Eurotransplant is not a community under the system of national balance points does not negate the fact that Eurotransplant is a community in relation to the residents of non-member states: while the latter generally cannot be placed on Eurotransplant waiting lists for organs, the residents of member states can. This demonstrates the contrast between national and international aspects of solidarity, both of which are found in Eurotransplant. See *supra* note 41 and accompanying text. As I mentioned earlier, the focus of this article is on national solidarity.

^{54} I do not use the term ‘nationalistic’ here because solidarity applies to the residents—both nationals (citizens) and nonnationals (non-citizens)—of a given country.

^{55} James Neuberger & Gill Thomas, *When the Law Meets Organ Transplantation: The Experience from the United Kingdom*, 92 TRANSPL. 262 (2011) (‘Many jurisdictions have accepted that organs donated from deceased donorsshould be considered a national resource and not “owned” by the local or retrieval team so [the] rules [of the procurement and allocation of organs] must be applied nationally.’).

^{56} I. Glenn Cohen, *Organs without Borders? Allocating Transplant Organs, Foreigners, and the Importance of the Nation-State (?)*, 77 L. & CONTEMP. PROBS 189—91, no. 3 (2014) (criticizing the analogy between organs and national resources as being ‘too strong’).

^{57} Søren Bak-Jensen, *To Share or Not to Share? Institutional Exchange of Cadaver Kidneys in Denmark*, 52 MED. HIST. 23, 40 (2008).

^{58} Id.
the architects of the system of transnational organ sharing feared could decrease in such a system. At the same time, the solidarity principle within each country sought to prevent the ‘crowding out’ of local altruism and stimulate local donations by ensuring the residents of a given country that their fellow residents will be prioritized in a waitlist for organs procured within than country.

Second, as some authors have observed, procuring organs entails costs that are borne by the community where the organs are procured. Therefore, in order to be compensated for those costs, the community should have priority in the allocation of organs procured in it. Within Eurotransplant, that community is a country, which leads to the system of national balance points rewarding the countries where more organs are procured.

Finally, the third reason for adopting a statist view on community for solidarity purposes lies with the legitimacy of the government. Unlike the stimulation of local donations and the costs of procuring organs, which are empirically complex but theoretically straightforward reasons for a statist understanding of community (both are consequentialist), legitimacy in the context of solidarity is somewhat harder to trace to its ethical origins. To put the question ex contrario, why is it potentially illegitimate for the government to treat foreign residents as the members of the same community for purposes of organ allocation? The answer to that question lies at the third layer of meaning of solidarity: reciprocity.

Reciprocity is a ‘well-established principle of justice’, according to which fair allocation of goods is done on a quid pro quo basis. While the precise meaning of quid and quo can be notoriously difficult to define in various contexts, in solidarity in organ allocation the idea of reciprocity seems straightforward and manifests itself in two ways. First, it stipulates that those who have invested in the infrastructure of organ procurement and allocation have stronger claims on organs procured via that infrastructure. In this instance, investments in transplantation centers, medical education, increasing awareness, and other technical, medical, and organizational aspects of organ transplantation are imagined to be reciprocally exchanged for priority access to organs. Second, reciprocity stipulates that those who live in the same community (the country) have the potential to contribute to the pool of organ transplants. In this case, potential donation of an organ is reciprocally exchanged for priority access to organs.

Importantly, in order for the idea of reciprocity to work, the ‘community’ in a given country must be understood as the ‘residents’ or the ‘population’ without differentiation between the donors and recipients of organs and between those who have actually invested in the transplantation infrastructure and those who have not. Indeed, from the

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59 Wujciak & Opelz, supra note 32, at 1513.
60 Cohen, supra note 56, at 181, quoting NORA MACHADO, USING THE BODIES OF THE DEAD: LEGAL, ETHICAL AND ORGANIZATIONAL DIMENSIONS OF ORGAN TRANSPLANTATION 69 (1998). Cf. Guido Calabresi, Do We Own Our Bodies?, I HEALTH MATRIX 5, 15 (1991).
61 Cohen, supra note 56, at 184; Søren Bak-Jensen, supra note 57, at 41.
62 NORA MACHADO, USING THE BODIES OF THE DEAD: LEGAL, ETHICAL AND ORGANIZATIONAL DIMENSIONS OF ORGAN TRANSPLANTATION 69 (1998).
63 See eg Cohen, supra note 56, at 181–86 (discussing empirical questions about crowding out effects and increased costs of procuring organs).
64 Gubernatis, supra note 45, at 3264.
65 See eg Cohen, supra note 56, at 196–97.
66 Eurotransplant Manual, Chapter 2 The Recipient (version 4.0, 2013), at 14.
standpoint of individual recipients, the system of solidarity is hardly reciprocal. On the one hand, the resident donors of a given country are expected to provide a sufficient number of organ transplants to the resident recipients in that country. On the other hand, if those expectations are not met, the balancing system ‘punishes’ the resident recipients by lowering their organ national balance points and overall organ allocation score. Furthermore, the system disadvantages even those resident recipient candidates who have actually invested in the transplantation infrastructure. From this individual welfare perspective, while the international cooperation among the states is based on the idea of reciprocity at a collective level, at the individual level the allocation of organs is not reciprocal.

Things look different, however, if we unify both donors and recipients of organs and the ‘investors’ and ‘free-riders’ into the single category of ‘residents’ or ‘population’. In that case, the system of national balance points starts looking reciprocal: the residents who provided more organs or on average invested more also receive more organs, and vice versa.

As this analysis demonstrates, the relationship between the communitarian and reciprocal aspects of solidarity is symbiotic, or, as one might also put it, circular. On the one hand, a statist understanding of community is justified by a reference to the reciprocal relations of investment between the residents of a given country. On the other hand, the understanding of reciprocity relies on the status quo in which only the residents of a given country (without differentiation between organ donors and recipients) mutually invest in the organ transplantation infrastructure or the pool of transplants. In other words, while reciprocity needs a specific interpretation of community to establish itself as a feature of solidarity, the community also needs reciprocity to protect itself from free riders in the transnational sharing of organs. The latter goal is achieved by prioritizing the residents of an organ—exporting country over the residents of importer—countries. In that respect, the reciprocity and community aspects of solidarity reinforce each other: reciprocity protects the residents of communities with higher donation rates from free-riders, whereas the communitarian spirit of helping their fellows deepens the reciprocal relations of interdependence between the members of that community.

These three aspects—distribution, community, and reciprocity—constitute the policy foundation for national solidarity and the system of national balance points within transnational organ sharing. Importantly, the idea that serves as a common denominator for all these aspects of solidarity is that of collective welfare. Indeed, according to the solidarity principle, the distribution of organs is made on the collective level of countries participating in transnational organ sharing. Furthermore, solidarity applies to the sharing of organs among the communities of residents of those countries, who are not differentiated into the donors and recipients of organs, let alone individuals with various medical needs. Finally, reciprocity in the solidarity-based system of transnational organ sharing is applied to the relations between the countries or communities in those countries, not relations between the individual donors and recipients of organs.

67 While the national balance points component of the kidney allocation score does not take into account the medical needs of individual patients, other components of that overall score do. In this respect, the non-individualized nature of solidarity is arguably balanced by individualized medical factors.
In international instruments, this idea of collective welfare finds its manifestation in the concept of self-sufficiency, which can be found in the Declaration of Istanbul on Organ Trafficking and Transplant Tourism (the Declaration), adopted under the auspices of The Transplantation Society and the International Society of Nephrology and signed by the representatives of many countries, including European ones.68

The Preamble to the Declaration proclaims organ transplantation to be ‘a shining symbol of human solidarity’.69 The Declaration further specifies that ‘[j]urisdictions, countries and regions should strive to achieve self-sufficiency in organ donation by providing a sufficient number of organs for residents in need from within the country or through regional cooperation’.70 In the Declaration, self-sufficiency, defined at the national level, appears to be a legal standard, according to which the government should seek to achieve the collective good of being able to provide enough organs to its residents. Accordingly, international cooperation violating that standard would undermine the collective good (for instance, by giving too many organs to foreign residents). This compels a conclusion that, under the collective good-based principle of solidarity, not only do the countries have no duty to provide the organs of their residents to foreigners if that would violate the standard of self-sufficiency, but also that such transnational allocation of organs is wrong.71

In this section, I have analysed the three aspects of solidarity in transnational organ sharing—distribution, community, and reciprocity—and traced their origins to the idea of collective welfare and the corresponding legal standard of self-sufficiency. In the next section, I shall answer the question of whether solidarity is normatively justified.

III. SOLIDARITY IN ORGAN TRANSPLANTATION: A NORMATIVE CRITIQUE

In this section, I rely on my previous descriptive analysis of the policy foundations of solidarity to analyse it normatively. First, I examine whether solidarity can be justified by the leading theories of global justice (cosmopolitan, intermediate, and statist). Second, I demonstrate that even if solidarity can be supported by some theories of global justice, it still relies on several fictions about the procurement and allocation of organs. Each of those fictions not only fails to account for the specifics of human organs as a scarce resource, but also is perilous for the individual recipients of organs. Third, I show how solidarity and the system of national balance points with their orientation toward collective welfare violate the basic precepts of organ allocation articulated in national and international instruments. Based on these findings, I conclude that solidarity and

68 Participants in the International Summit on Transplant Tourism and Organ Trafficking convened by The Transplantation Society and the International Society of Nephrology in Istanbul, Turkey, 30 Apr. to 2 May 2008, The Declaration of Istanbul on Organ Trafficking and Transplant Tourism (2008), http://multivu.prnewswire.com/mnr/transplantationsociety/33914/docs/33914-Declaration.of.Istanbul-Lancet.pdf (accessed Dec. 9, 2017). (The Declaration of Istanbul).

69 The Declaration of Istanbul pmb1.

70 Id. principle 5 (emphasis added).

71 Cf. Cohen, supra note 56, at 201 (‘Can we take the argument one step further and suggest that not only does this [reciprocity-based investment and contribution] argument suggest a lack of a duty to include foreigners, but also implies that it is wrong to include them on U.S. transplant lists, except in cases of true domestic waste?’) (emphasis in original).
the system of national balance points in the way they are now present in the general scheme of transnational organ sharing are normatively unsound.

A. Solidarity and global justice

In this section, I answer the question of whether the leading theories of global justice support or condemn the principle of national solidarity. Before I start, two caveats are in order. The first one is that a complete analysis of national solidarity under any theory of global justice requires two steps: establishing the theory’s attitude toward solidarity and proving that the theory itself is correct. The second step lies beyond the scope of this piece and therefore I do not discuss the plausibility of the theories of global justice I use in the following analysis. My more modest goal in this section is to explore whether the leading theories of global justice can justify solidarity and the system of national balance points it entails. If any of them can, and a reader is convinced by that theory, then we should explore additional normative grounds to accept or reject solidarity.

The second caveat is that answering the question of how the leading theories of global justice would react to solidarity in organ sharing and the system of national balance points requires the extrapolation of those theories to bioethics. While these theories originally apply to a broad range of resources (from natural resources, to access to healthcare, to income and wealth, to education), there are good reasons to believe that human organs are a resource sui generis, and the general principles postulated by theories of global justice do not apply to this special resource. This makes the ‘ethical algebra’ of extrapolating the theories of global justice to transnational organ sharing a treacherous task. It might well be the case that had the authors considered organ procurement and allocation in their analysis, they would have come up with a different theory of global justice. Here I bracket out these concerns by adopting a ‘bioethically friendly’ interpretation of the leading theories of global justice, according to which I shall presume that they do apply to organ procurement and allocation unless there is clear and convincing evidence that they do not.

For purposes of my analysis, I shall examine solidarity in light of the three families of theories of global justice (ie theories about ‘the international requirements of justice’) : cosmopolitan, intermediate, and statist. At the most basic level, the difference between these three groups of theories lies with their attitude toward the relevance of ‘geographic boundaries in the application of moral theory’. Cosmopolitan theories hold that those boundaries bear no moral significance and insist that a theory of justice should apply with equal force to the members of the international community. By contrast, statist theories posit that ‘the obligations of distributive justice apply

72 Charles R. Beitz, Justice and International Relations, 4 PHIL. & PUB. AFF. 360 (1975).
73 NORMAN DANIELS, JUST HEALTH: MEETING HEALTH NEEDS FAIRLY (2008).
74 JOHN RAWLS, A THEORY OF JUSTICE (rev. ed. 1999).
75 Id.
76 Such characteristics of organs include, inter alia, their harvesting from human bodies, their non-evaluation in monetary terms, and their individual distribution. I shall discuss the specificity of organs as a resource in more detail in the next section when analysing how it features in the application of the solidarity principle to the procurement and allocation of organs.
77 Thomas Nagel, The Problem of Global Justice, 33 PHIL. & PUB. AFF. 113, 114 (2005).
78 I. Glenn Cohen, Medical Tourism, Access to Health Care, and Global Justice, 52 VA J. INT’L L. 1, 17 (2011).
79 Id.
only within the nation-state and not to citizens of other nations’,

80 with the exception of some limited forms of assistance by the better-off states to the worse-off ones. Finally, intermediate theories, true to their name, are in between cosmopolitan and statist camps and suggest that while the duties of distributive justice do not apply internationally with equal force, the citizens of different countries owe each other some duties that are stronger than the minimal duties of assistance recognized by the statist theories.81

The cosmopolitan theories of global justice should be most skeptical about national solidarity and the system of national balance points.82 This is because while cosmopolitan theories insist that national borders should play no or limited role in how we allocate scarce resources, the national solidarity principle insists on just the opposite. As I demonstrated in previous sections, one of the indispensable aspects of solidarity is a statist understanding of community, among the members of which organs are shared. This understanding is anti-cosmopolitan.83 The situation would be different had solidarity been applied among different countries for the purpose of organ sharing,84 so that the understanding of the ‘community’ would be not statist, but international. But, as the system of national balance points demonstrates, that appears not to be the case: within that system the community is Eurotransplant’s member state, not Eurotransplant itself. Therefore, those who share cosmopolitan ideas about global justice have good normative reasons to reject national solidarity.

Some authors have argued for a ‘moderate understanding’ of cosmopolitanism,85 which would justify ‘cosmopolitan forms of solidarity’.86 This moderate understanding can supposedly lead to ‘moral partiality’ and inclusiveness.87 This version of moderate cosmopolitanism is strikingly similar to an intermediate theory of global justice suggested by Joshua Cohen and Charles Sabel.88 Specifically, Cohen and Sabel argue that an idea of inclusion, both procedural and substantive, is central to the domain of global

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80 Id. at 26.
81 Id. at 34.
82 While there are distinctions drawn between utilitarian, prioritarian, and sufficiencyarian theories of global justice that belong to the cosmopolitan family (Cohen, supra note 78, at 17–26), that distinction makes no difference for my present analysis, as solidarity undercuts the basic conceptual commitment shared by all three subgroups of cosmopolitan theories. In other words, Peter Singer with his commitment to utilitarianism, Charles Beitz with his commitment to prioritarianism, and Martha Nussbaum with her commitment to sufficiencyarianism must be compelled by their respective theories to be against the national solidarity principle in the procurement and allocation of organs. See Peter Singer, Famine, Affluence, and Morality, 1 PHIL. & PUB. AFF. 229 (1972); Charles Beitz, Justice and International Relations, 4 PHIL. & PUB. AFF. 360 (1975); MARTHA NUSBAUM, THE FRONTIERS OF JUSTICE: DISABILITY, NATIONALITY, SPECIES MEMBERSHIP (2006).
83 See generally Simon Derpmann, Solidarity and Cosmopolitanism, 12 ETHICAL THEORY AND MORAL PRACTICE 303 (2009). See also Id. at 303 (noting ‘an apparent opposition between what is subsumed under the terms “solidarity” and “cosmopolitanism”’) and 305 (‘It is distinctive about obligations of solidarity that they do not only imply, but are essentially about the inequality of moral concern for those who do belong to a community and those who do not. One could say that obligations of solidarity are not universal, but communal in the sense that not everyone, but only the members of a community have these obligations. And not everyone, but only members of a community can make the corresponding claims.’) (emphasis in original).
84 Cf. Derpmann, supra note 83, at 308 (discussing ‘the understanding of solidarity that is European in the sense that it does not only take place within European states, but also between them.’) (emphasis in original).
85 Id. at 314.
86 Id.
87 Id.
88 Joshua Cohen & Charles Sabel, Extra Rempublicam Nulla Justitia?, 34 PHIL. & PUB. AFF. 147 (2006).
justice’. Inclusion stems from interdependence, cooperativism, or institutionalism: it appears in the instances where there is ‘an institution with responsibilities for distributing a particular good’, or there exists ‘a consequential scheme of organized, mutually beneficial cooperation’, or ‘the fate of people in one place depends substantially on the collective decisions taken by people in another place, and the fate of people in that latter place depends substantially on the collective decisions of people in the former’. In these circumstances, inclusion ‘triggers norms more demanding than humanitarianism but less demanding than egalitarianism with its requirement of “equal concern, equal status, and equal opportunity”’. Finally, those intermediate norms dictate that it is unjust when ‘the very urgent needs of some people are going unaddressed, although they could be addressed without large costs to others, whose circumstances are improving a great deal. More simply stated, people who are badly off are not getting an acceptable share, decent opportunities, or reasonable improvements, on any conception of acceptable, decent, or reasonable’.

Notably, Cohen and Sabel seem to limit the application of their theory to the global economy, illustrating its application with the examples from the activities of the WTO, IMF, and ILO. Another proponent of that intermediate theory, Norman Daniels, has explicitly refused to apply it to organ transplantation. Despite these discouraging indications, could the intermediate theory justify or criticize the national solidarity principle in transnational organ sharing?

Cohen and Sabel’s theory will condemn solidarity if two conditions obtain. First, it will have to show that organ sharing falls within the scope of the duties of inclusion. Second, if organ sharing does fall within the scope of the duties of inclusiveness, the theory will have to demonstrate that while the standard of the norms triggered by inclusion is lower than the egalitarian one, solidarity still does not meet even that lower standard. Whether either (or both) of these conditions obtain depends on how we define inclusiveness and the norms of global justice that it triggers. Unfortunately, the Cohen and Sabel theory is intentionally context-sensitive on those issues and therefore avoids formal definitions of inclusiveness and the norms that it triggers. Therefore, we are left with guessing whether inclusiveness is broad enough to encompass organ sharing, and whether the bar of the intermediate norms of global justice is low enough for solidarity to pass.

From what Cohen and Sabel say (‘[it is unjust when] the very urgent needs of some people are going unaddressed, although they could be addressed without large costs to others’), it seems that organ sharing does not fall under the scope of inclusiveness, for

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89 Id. at 149.
90 Id. at 153, 164.
91 Id. at 153.
92 Id. at 154.
93 Id.
94 Id. at 167-73.
95 Norman Daniels et al., Benchmarks of Fairness for Health Care Reform: A Policy Tool for Developing Countries, 78 BULL. WORLD HEALTH ORGAN. 740 (2000) (‘Because of our focus on fairness, we also avoided some culturally sensitive issues, such as abortion, euthanasia, and the use of human and fetal tissues or organs.’).
96 Cohen & Sabel, supra note 88, at 150 (‘[O]ur aim here is neither to defend any particular interpretation of inclusion or of global justice . . . ’).
97 Id. at 154.
it could be argued that the urgent needs for transplantable organs in country A can be addressed only at large costs involved in sharing organs procured in country B with the residents of country A (in a case of bilateral organ exchange). Whether those costs are really ‘large’ (and how to measure their significance) is an empirical question, the resolution of which is beyond the scope of this piece. It is worth pointing out, however, that the inclusion or exclusion of organ sharing in or from the scope of the duties of inclusion depends on how a particular empirical inquiry is resolved, which makes the justification that the intermediate theory of global justice might provide to solidarity contingent upon empirical findings. The same can be said about the second condition for justification (ie whether solidarity meets the lower bar of non-egalitarian norms of global justice triggered by the duty of inclusiveness). Therefore, the Cohen and Sabel theory cannot provide a principled justification for solidarity—only a conditional one.98

The last group of theories of global justice—the statist theories—might look most promising to justify national solidarity. Probably the most prominent representatives of those theories are John Rawls99 and Thomas Nagel,100 who argue that the concept of justice applies within the nation-state only and does not apply internationally.101 At first sight, this seems to be a sound justification for solidarity. As my previous analysis demonstrates, one fundamental aspect of solidarity is a statist understanding of community for purposes of the procurement and allocation of organs. Therefore, one might think that this understanding is supported by a statist theory of global justice, according to which the citizens of a given country are entitled to socioeconomic justice within that country because they are the members of that country’s political society, whereas non-members are not.102

Upon a closer look, however, this conclusion seems unavailing. The main figures in the statist theories of justice camp, Thomas Nagel and John Rawls, limited their theories of justice to socioeconomic justice (Nagel)103 and the basic structure of social institutions (Rawls),104 so it is not clear whether their theory can be applied to organ sharing. While Nagel’s theory of global justice could be extended to cover the transnational sharing of organs (more on which in a moment), the Rawlsian theory of ‘the law of peoples’ is much more resistant to that extension, as for Rawls justice is about the basic structure of society and its political institutions, and not about the redistribution of wealth or welfare among people.105 Therefore, in what follows I shall focus on a theory

98 In my analysis here, I do not discuss another intermediate theory of global justice by Thomas Pogge. See Thomas Pogge, World Poverty and Human Rights, 19 ETHICS & INT’L AFF. 1 (2005). The reason is that Pogge’s theory addresses the issues of poverty and radical inequality of income between the developed countries and the ‘global poor’. Id. Therefore, this theory appears to be irrelevant to the principle of solidarity and the system of national balance points in Europe, which does not belong to the global poor. By contrast, Cohen and Sabel’s theory arguably has broader implications.
99 JOHN RAWLS, THE LAW OF PEOPLES 113–20 (1999).
100 Nagel, supra note 77.
101 Cohen, supra note 78, at 26–28.
102 Nagel, supra note 77, at 128.
103 Id. at 114.
104 RAWLS, THE LAW OF PEOPLES 113–20.
105 In ‘The Law of Peoples’, Rawls repeatedly underscores the institutional character of his theory of justice. See Id. at 105–20 (discussing the duty of assistance to ‘burdened societies’ and ‘distributive justice among peoples’). Rawls also emphasizes that there are no duties of global redistribution of income, wealth, or welfare among countries, Id. at 117–18, and the duty of assistance to burdened societies aims to ‘help’ [those
of global justice proposed by Thomas Nagel, who was concerned about the distribution of socioeconomic goods among the nations,\(^\text{106}\) which is arguably closer to the transnational allocation of organs\(^\text{107}\) than the Rawlsian institutionalist view of global justice.

For Nagel, a statist understanding of justice includes the citizens’ claim right to ‘the amelioration through public policy of unfairness in the distribution of social and economic goods’.\(^\text{108}\) The basis for that claim, according to Nagel, is ‘fully associative’\(^\text{109}\) in that ‘it is [the] complex fact—that we are both putative joint authors of the coercively imposed system, and subject to its norms, i.e., expected to accept their authority even when the collective decision diverges from our personal preferences—that creates the special presumption against arbitrary inequalities in our treatment by the system’.\(^\text{110}\) Accordingly, those who do not participate in that relationship of coercion and being the ‘authors’ of the coercive system within a state are not entitled to have the requirements of justice applied to them. At the same time, those non-citizens are entitled to ‘some minimal concern’ and ‘some form of humane assistance’,\(^\text{111}\) which are, however, ‘quite apart from any demand of justice’.\(^\text{112}\)

What would this view on justice mean for the system of national balance points? We could argue, with a stretch, that organs are a kind of ‘social goods’ that Nagel meant when developing his theory. Accordingly, his theory would justify the system of national balance points under two conditions. First, there should not exist a ‘coercively imposed system’ of the procurement and allocation of organs at the international level: if such system of a limited ‘global sovereign’ exists, then Nagel’s views should compel the conclusion that those donors and recipients of organs who participate in that system are entitled to equality and non-discrimination, which is contrary to what national solidarity demands. Second, if there is no such ‘global sovereign’, the theory will justify national balance points if the duties of organ sharing are above the low threshold of minimal duties of humanitarian assistance.

While the second condition for justification of the system of national balance points under Nagel’s theory seems to obtain easily (helping people in foreign countries by sharing organs with them is well beyond the minimalist requirements of humanitarian assistance Nagel discusses), the first condition does not seem to be met, as there are good reasons to believe that the system of transnational organ sharing, including the system of national balance points, is coercive. As I mentioned earlier, Eurotransplant (where solidarity and the system of national balance points are implemented) is a highly centralized organization for organ sharing that maintains centralized waiting

\(^{106}\) Nagel, supra note 77, at 114.

\(^{107}\) Cf. Cohen & Sabel, supra note 88, at 156 (‘Although Nagel’s case for Strong Statism focuses exclusively on norms of “socioeconomic justice,” the implications are completely general and apply with equal force to political-process norms, which apply to the governance of supranational arrangements.’).

\(^{108}\) Nagel, supra note 77, at 127.

\(^{109}\) Id.

\(^{110}\) Id. at 128–29.

\(^{111}\) Id. at 118.

\(^{112}\) Id.
lists for candidates for organ transplantation. The criteria for the procurement and allocation of organs are agreed by the medical professionals from Eurotransplant member states (who are presumably representing the residents of those states) and then applied by participating transplantation centers, donor hospitals, and tissue labs. While the governments of Eurotransplant member states are involved in the work of that organization, their participation is largely about periodic reviews of the Eurotransplant activities and does not concern the criteria, according to which organs are procured and allocated. Therefore, it can be argued that the criteria for the procurement and allocation of organs adopted in Eurotransplant constitute a system ‘coercively imposed’ by the participating medical institutions upon the recipients of organs in Eurotransplant member states under the threat of a lower chance of obtaining a transplant. Accordingly, the organ recipients participating in that system are entitled to equality in how the organs are allocated. Since the system of national balance points runs contra to that equality requirement, it is unjust under Nagel’s view.

These are the leading theories of global justice and their probable responses to national solidarity and the system of national balance points. Among those theories, only an intermediate theory by Cohen and Sabel offers conditional support to the system; by contrast, cosmopolitan theories and Nagel’s statist theory reject it. How persuasive is this? As I mentioned earlier, it depends on what one thinks about the relevance of those theories to the transnational sharing of organs and about the plausibility of each of those theories. If one thinks that an intermediate theory of global justice is relevant and correct, then there are good reasons to accept national solidarity if one also believes that sharing organs with foreign nationals empirically bears large costs (so that organ sharing is outside the duty of inclusiveness). This empirical assertion may not obtain in the case of ‘true waste’, in which the organs procured in one country are ‘extras’ that will not be used for transplantation and can be shared with another country.

At the same time, irrespective of one’s views on global justice and its relevance to organ transplantation, there are independent normative reasons to criticize national solidarity in transnational organ sharing and the system of national balance points it entails. The grounds for that critique are the subject of the next section.

B. Solidarity and fictions about organs
The functioning of the principle of solidarity (as the system of national balance points) has three important characteristics, all of which stem from the policy foundations of solidarity analysed above. First, recall that the system of national balance points assigns higher allocation scores to the residents of the countries with a higher export balance of organs. This means that the system funnels organs to the community of residents of exporting countries, and then the organs are redistributed among those residents in accordance with other criteria. In other words, the system of national balance points first allocates the organs at the collective level, after which the redistribution of organs among the individual recipients within that collective occurs.

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113 See generally Eurotransplant Manual, Chapter 1 Introduction (version 5.5, 2016).
114 Id.
115 Id.
116 Cohen, supra note 56, at 182 – 85.
Second, solidarity and the system of national balance points are based on the presumption of reciprocity: the residents of an exporting country have stronger claims for organs procured in that country because they are presumed to have invested in the transplantation infrastructure or to have the potential to contribute to the pool of available organs.117 Third, the reciprocal nature of solidarity and the system of national balance points relies on a specific understanding of the community in exporting countries: that community is presented as a monolith of ‘population’ or ‘residents’ without differentiation between the donors and recipients of organs.

In the rest of this section, I demonstrate that these characteristics of solidarity and the system of national balance points are based on fictions, which serve the legitimate collective welfare purposes of increasing local donations and offsetting the costs associated with local procurement of organs. In the next section, I examine the utility of those fictions more closely and conclude that they should be rejected.

Let us begin with the first characteristic of solidarity and the system of national balance points: funneling organs to the country with the highest export rate and then redistributing them among the residents of that country under medical (e.g., HLA-compatibility, urgency of medical condition) and non-medical (e.g., pediatric bonus) criteria. This two-level distribution mechanism (collective and then individual allocation) ignores one of the basic features of organs as a resource: unlike other scarce resources, such as energy or money, organs are always allocated to individuals only and never to the collectives of individuals for further redistribution among the members. The system of organ allocation and its matching mechanisms are designed and function to ensure the best feasible match between a transplant candidate and an organ suitable for that candidate according to the applicable medical and non-medical criteria. While there are some qualified exceptions, such as separate waiting lists for pediatric and adult candidates118 and paired exchange and chain donations,119 the general principle remains the same: organs are allocated to individuals, not to collectives. This principle reflects the idea of medical compatibility and the individual welfare of the candidate.

In light of this general principle, national solidarity and national balance points are puzzling. On the one hand, national balance points are only a part of allocation score of an individual patient. On the other hand, their primary purpose is to channel organs to the collectives with higher donation rates, thereby putting into a disadvantage the candidates who are not the members of those collectives. This introduces a collectivist component into the individual organ allocation score, significantly affecting it if the national scores are high or low enough. This means that under the system of national balance points the organs are distributed to individuals as if they were distributed to collectives.120 This fiction runs afoul of the fundamental principle of individual organ allocation discussed above.

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117 See supra notes 61 and 62 and accompanying text.
118 See eg Organ Procurement and Transplantation Network, How Organ Allocation Works, https://optn.transplant.hrsa.gov/learn/about-transplantation/how-organ-allocation-works/ (accessed Dec. 9, 2017). Notably, this exception is based on a medical judgment that ‘[p]roper organ size is critical to a successful transplant, which means that children often respond better to child-sized organs’. Id.
119 I am indebted to I. Glenn Cohen for this observation.
120 This situation is different from a scenario where an individual receives certain goods by virtue of her membership in a certain class (such as a creditor receiving her share of corporate assets after the corporation goes bankrupt). While in the latter case the goods (corporate assets) are first distributed to the class as a whole and
The second characteristic of solidarity is that it presumes that the residents of the country have invested (or may invest) in the country’s transplantation infrastructure or have the potential to contribute to the pool of organs available for transplantation. Some authors have expressed their doubts on whether that assumption is true. I believe the assumption is a broad generalization that appears to be false in many instances, especially in the European Union with its freedom of movement for workers, which erodes the investment ties between the country and its nationals. It is not implausible to think of candidates who were born in and are the citizens of country A, went to university and paid their tuition in country B, and then started working in country C (sending remittances back to their family in country A) before developing a condition requiring transplantation. It is not clear how to apply the solidarity principle to such candidates using the ‘reciprocity of investment’ rationale. The same can be said about pediatric candidates whose potential to invest in the transplantation infrastructure or contribute to the pool of available organs can be significantly impeded by the medical conditions that require transplantation. At the same time, the formal rules that determine citizenship or residency for organ transplantation purposes may not be reflective of the reciprocal investment rationale at all because it is hard to administer. Therefore, the presumption of reciprocity of investment in solidarity is too broad and in a number of cases appears to be a fiction.

The third characteristic of national balance points and solidarity is the amalgamation of organ donors and recipients into one category of ‘population’ or ‘residents’ in order for the principle of reciprocity between the countries to work. This unification of donors and recipients reflects the same collectivist rationale that undermines the individualist principle of organ allocation I discussed above: while there is reciprocity at the collective level, individual recipients are rewarded or ‘punished’ for the conduct of individual donors, which is not reciprocal. Furthermore, the fusion of donors and recipients into one collective for purposes of organ allocation does not correspond to reality because the interests and the status of the two groups are quite distinct. Generally speaking, the donors and their families are primarily concerned about their bodily integrity and harm to their bodies and only residually concerned about saving the lives of transplantation candidates (had it been otherwise, the scarcity of transplantable organs would be far less severe), while the recipients are primarily concerned about their lives. As far as the status is concerned, those who decide to donate their organs are perceived as ‘heroes’ who agree to their bodily integrity being violated, whereas the transplantation candidates are perceived as the ‘victims’ of their condition. In these respects, the unification of the donors and recipients of organs into the same category of ‘residents’ is implausible, for they are two quite distinct groups.

As this analysis demonstrates, the regime of national solidarity, including the system of national balance points, is based on three assumptions: distribution of organs to collectives, reciprocity of investment and donation, and unification of donors and recipients. All these assumptions are fictitious. Establishing that the regime of national solidarity is based on these fictions, however, should not end our inquiry: there are many areas of law, including health law and bioethics, where fictions are employed (such as the presumption, existing in the ‘opt-in’ systems of organ donation, that the decedent
did not want her organs to be donated unless clearly stated otherwise, which may not be true in many cases). As noted in the literature,\textsuperscript{121} in our normative assessment of fictions two questions are called for. The first question is whether fictions serve a legitimate purpose. If they do not, they should be abandoned. If they do, the second question, following Lon Fuller,\textsuperscript{122} is whether the benefits of employing the fictions outweigh the costs. If resorting to fictions is beneficial, the fictions should be kept; if not, they should be rejected.

Applying this analysis to the fictions in national solidarity, in response to the first question it is fair to say that those fictions do serve the legitimate purpose of increasing local donation. (It could also be argued that they serve the goal of compensating the communities for the costs associated with the local procurement of organs, although that argument would require further inquiry into how precisely a priority in organ allocation matches the costs involved in organ transplantation on a compensation scale.) Therefore, we can proceed to the second question, a response to which requires cost–benefit analysis, which is the subject of the next section.

C. Benefits and costs of fictions in solidarity

What are the benefits of the fictions that underlie the principle of solidarity in transnational organ sharing and the system of national balance points? First, the system seems to succeed in maintaining ‘a reasonably balanced kidney exchange rate among [participating] countries’.\textsuperscript{123} As Mayer and Persijn observe, ‘Prior to the initiation of [the system] in March 1996, Austria had a negative balance of 25 kidneys, Belgium and Luxembourg of 57 and the Netherlands of 42. Germany on the contrary had a positive balance of 136. On 11 March 2005, the corresponding numbers were only +6, −2, +4, and +11, respectively.’\textsuperscript{124} This testifies that the system is successful in furthering the goal of collective welfare in participating countries by diminishing the opportunities for importing countries to free-ride on the population of organ-exporting countries.\textsuperscript{125}

By doing so, the system arguably generates another benefit: it furthers the individual welfare of the citizens in participating countries. If the system reaches its goal and the donation–transplantation ratio is even among the participating countries, then the system will assign the same national balance points score to all recipients, effectively

\textsuperscript{121} Konstantin Tretyakov, The Right to Die in the United States, Canada, and China: Legal Fictions and Their Utility in a Comparative Perspective, 21 U. Pa. J.L. & Soc. Change (forthcoming 2018).

\textsuperscript{122} Lon L. Fuller, Legal Fictions 9, 51–53 (1967). Fuller applied his analysis to legal fictions, whereas the fictions associated with solidarity are not legal sensu stricto, for the regime of solidarity (the system of national balance points) is specified in the rules of Eurotransplant which are not a traditional source of law. At the same time, as I argued earlier, those rules do constitute a coercive system backed up by the discretionary authority of medical professionals who develop the rules of organ allocation. Therefore, the regime of solidarity and the fictions underlying it may be called ‘quasi-legal’, and Fuller’s consequentialist analysis is applicable to them. For analysis of fictions in the context of organ transplantation, see Franklin G. Miller & Robert D. Truog, Death, Dying, and Organ Transplantation: Reconstructing Medical Ethics at the End of Life 1–25 (2012).

\textsuperscript{123} Mayer & Persijn, supra note 8, at 2.

\textsuperscript{124} Id. at 3.

\textsuperscript{125} One could also argue that the success of the system of national balance points is attributable to the fact that it reflects the sentiments of the populations of participating countries, who can be more willing to donate their organs to their ‘neighbors’ (ie the members of the same community). I address this issue in some detail in section IV.B.
eliminating its weight from the overall kidney allocation score and ensuring high local
donation rates at the same time.

Finally, it could be argued that the potential of the system of national balance points
to produce negative outcomes to the individual recipients who would have had a higher
overall allocation score without the system in place is reduced by the fact that the na-
tional balance points are only a part of the overall kidney allocation score. The system
produces a negative impact on individual recipients only when multiple recipients have
identical overall allocation scores before national balance points are factored in, but this
situation is virtually non-existent.\(^{126}\) Therefore, the argument concludes that solidarity
and the system of national balance points do not make real transplantation candidates
worse off.

The existence of the collective benefit that solidarity and the system of national bal-
ance points confer upon the residents of the organ-exporting countries depends on
how desirable the balance is in those countries. We could imagine a country where or-
gan donations are a religious taboo, which the government of that country is willing
to maintain even at the price of fewer transplants and a lower organ exchange balance.
In Eurotransplant, however, it seems obvious that the member states of that organiza-
tion do strive for a balanced kidney exchange among themselves. Therefore, it is hard
to disagree with the collective benefit that solidarity and the system of national balance
points bring about. At the same time, the arguments about benefits the system allegedly
confers upon the individual recipients of organs in the organ-importing are much less
plausible.

The individual recipients in importing countries can reap the benefits of solidarity
only in the ideal situation, in which donation–transplantation ratio is even among the
countries. At the same time, as Mayer and Persijn’s data cited above suggest,\(^ {127} \) while
the exchange rates tend to come into balance over time, a perfect balance is hardly at-
tainable, which means that individual recipients in the importing countries will con-
tinue to be worse off compared to the recipients in the exporting countries.\(^ {128} \)

Finally, the benefit that the system of national balance points allegedly confers on the
individual recipients in participating countries also poses the problem of intertemporal
justice.\(^ {129} \) While the issue of intertemporal justice is too complicated to be elaborated
upon here in full, the problem it poses has two aspects that can be put sharply as fol-
lows. First, until the countries reach a balanced exchange rate, the individual recipients
in the importing countries will suffer the consequences of the system, and their lower al-
location scores will incentivize increased donations so that the transnational system of
organ allocation arrives at a balance. Second, when the recipients in a given country re-
cieve a certain amount of kidneys on day 1 so that the country becomes the importer of
kidneys on day two (recall that the national balance points are calculated daily for each

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\(^{126}\) Cohen, \textit{supra} note 56, at 182 (discussing the case of an “equally good” match’).

\(^{127}\) Mayer & Persijn, \textit{supra} note 8, at 3.

\(^{128}\) One could respond to that by saying that this relative disadvantage for the recipients in the importing coun-
tries is dwarfed by the overall advantage they have because the system of national balance points exists. This
counterargument, while requiring further empirical investigation, sounds plausible, which is why I suggest
not to be rid of the system of national balance points completely, see section IV.B, but rather to make it more
balanced against the value of individual welfare of recipients of organs.

\(^{129}\) See also Cohen, \textit{supra} note 56, at 209 (discussing the issue of intergenerational justice in the context of
transnational organ sharing arrangements).
participating country), the recipients on day 1 have effectively decreased the chance of receiving a kidney for recipients on day 2.

While the second aspect of the problem of intertemporal justice seems relatively unproblematic (the future organ recipients have no valid claim against the present-day organ recipients about a kidney), the first aspect of the problem of intertemporal justice appears to be more troubling. It seems obvious that those recipients whose individual interests are disregarded under the idea of solidarity in the name of the collective good in the present (and the possible individual welfare of recipients in the future) have a valid concern about the fairness of the solidarity-based system, for they are effectively coerced to sacrifice their individual well-being now. Furthermore, their expected sacrifice is not in the form of fungible goods such as money, as can be the case with investments in medical research that will hopefully find a cure in several years from the moment the investments are made. Instead, solidarity asks the present-day recipients of organs to sacrifice their non-fungible good—health. This flies in the face of the principles of individual well-being in organ allocation declared at the national and international level. Finally, it is unclear what the justification for that sacrifice of individual well-being and health could be. The future potential recipients of organs have no valid claim against the present candidates for transplantation about a balanced organ exchange rate among participating countries which could justify the individual sacrifices that the solidarity principle leads to.

As far as the other effect of solidarity is concerned (it does not play a big role in organ allocation unless all other factors in the overall allocation scores are equal, which is very rare), it also seems unavailing. As I mentioned earlier, the proportion of national balance points in the overall kidney allocation score can be quite significant and outweigh the other components of the total score. In other words, if a recipient scores high enough on national balance points, she might find herself ahead of recipients from other countries whose ‘medical’ points scores are higher than hers.

Let me demonstrate this point with a concrete example. Below are excerpts from two tables from the Eurotransplant annual report for the year of 2015. 130

The last row of Table 1 shows the number of kidneys procured and used for transplantation in each country in 2015. The last row of Table 2 shows the number of total kidney transplants in each country in 2015. The discrepancies between the numbers in these two rows demonstrate how many kidneys were exported from or imported into each of Eurotransplant member states. If the number of procured and used kidneys in the country is higher than the number of total transplants in that country, then the country procured more kidneys than it used and exported the surplus. Conversely, if the number of procured and used kidneys in the country is lower than the number of total transplants in that country, then the country procured fewer kidneys than it needed and had to import the rest. Therefore, based on this data we can calculate the export and import scores and the national balance points for each country on December 31, 2015 (the last reported day in the document). The results are presented in Table 3.

If these calculations are correct, as of December 31, 2015, the biggest importer of kidneys among Eurotransplant member states was Germany (seventeen kidneys), and the biggest exporter was Belgium and Luxemburg, which are considered to be one

130 Eurotransplant International Foundation, Annual Report 2015, at 65, 71, https://www.eurotransplant.org/cms/mediaobject.php?file=AR_ET_20153.pdf (accessed Dec. 9, 2017).
### Table 1. Deceased donors/kidneys in Eurotransplant in 2015 (Table 5.1(ii) in the Report).

| Donors               | Austria | Belgium | Germany | Hungary | Croatia | Luxemburg | Netherlands | Slovenia |
|----------------------|---------|---------|---------|---------|---------|-----------|-------------|---------|
| One kidney used      | 16      | 30      | 65      | 12      | 21      | 0         | 38          | 5       |
| Two kidneys used     | 165     | 230     | 734     | 150     | 103     | 3         | 215         | 38      |
| Total kidney donors  | 181     | 260     | 799     | 162     | 124     | 3         | 253         | 43      |

| Kidneys              | Austria | Belgium | Germany | Hungary | Croatia | Luxemburg | Netherlands | Slovenia |
|----------------------|---------|---------|---------|---------|---------|-----------|-------------|---------|
| Transplanted         | 346     | 490     | 1533    | 312     | 227     | 6         | 468         | 81      |
Table 2. Kidney transplants (deceased donor) in 2015 (Table 5.4a(ii) in the Report).

| Type of transplant | Austria | Belgium | Germany | Hungary | Croatia | Netherlands | Slovenia |
|--------------------|---------|---------|---------|---------|---------|-------------|---------|
| Total              | 355     | 471     | 1550    | 303     | 208     | 470         | 64      |

country for the purposes of calculating national balance points (25 kidneys).\textsuperscript{131} As a result, recipients in Germany have zero national balance points added to their kidney allocation score, whereas recipients in Belgium and Luxembourg have \((17 + 25) \times 10 = 420\) national balance points. According to the Eurotransplant manual, this is more than the biggest number of points (400) a candidate can get for HLA typing in her allocation score.\textsuperscript{132}

It is true that these findings are tentative: they are true for those candidates who obtain their kidneys under the ETKAS program\textsuperscript{133} and only for kidneys obtained from deceased, not living donors. At the same time, these calculations do demonstrate the potential of national balance points to outweigh other important components of the kidney allocation score and the big role they play in organ allocation for those patients who obtain (or fail to obtain) cadaveric kidneys under ETKAS. Within that allocation program, national balance points and the underlying principle of national solidarity affect not only hypothetical ‘all-other-things-being-equal’ candidates, but a broader range of organ recipients.

This analysis demonstrates that while the collective benefit that the system of national balance points confers upon participating countries is real and significant (Table 3 shows that most Eurotransplant countries do maintain a positive kidney balance), the benefits that system allegedly confers on individual transplantation candidates are much more dubious. At the same time, it is the individual welfare of patients awaiting organ transplantation that lies at the core of organ transplantation and transnational organ sharing. The principle of the priority of individual welfare is declared in many international instruments, including those enacted under the auspices of the European Union, The Transplantation Society and the International Society of Nephrology, and Eurotransplant. Thus, the Directive on Standards of Quality and Safety of Human Organs Intended for Transplantation\textsuperscript{134} adopted within the framework of European Union declares, ‘The risk-benefit ratio [to individual patients] is a fundamental aspect of organ transplantation’.\textsuperscript{135} The Declaration of Istanbul reads, in pertinent part, ‘The primary objective of transplant policies and programs should be optimal short- and long-term medical care to promote the health of both donors and recipients’.\textsuperscript{136} Finally, the Ethical Charter for the Eurotransplant International

\textsuperscript{131} Eurotransplant Foundation, Eurotransplant Manual, Chapter 4 Kidney (ETKAS and ESP) (version 5.2., 2016), at 21.
\textsuperscript{132} Id. at 18.
\textsuperscript{133} In addition to the Kidney Allocation Score program, there also exist the Acceptable Mismatch program and the Eurotransplant Senior program for kidney allocation. See Eurotransplant Foundation, Eurotransplant Manual, Chapter 4 Kidney (ETKAS and ESP) (version 5.2., 2016), at 7.
\textsuperscript{134} European Parliament and Council Directive 2010/45/EU, on Standards of Quality and Safety of Human Organs Intended for Transplantation, 2010 O.J. (L 207) 14-26.
\textsuperscript{135} Id. pmbl. ¶ 11.
\textsuperscript{136} The Declaration of Istanbul, principle 4.
Table 3. ‘Export’ and ‘Import’ of Kidneys from Deceased Donors in Eurotransplant in 2015.

| Kidneys                      | Austria | Belgium and Luxemburg | Germany | Hungary | Croatia | Netherlands | Slovenia |
|------------------------------|---------|------------------------|---------|---------|---------|-------------|----------|
| Procured and transplanted    | 346     | 496                    | 1533    | 312     | 227     | 468         | 81       |
| Transplanted in total        | 355     | 471                    | 1550    | 303     | 208     | 470         | 64       |
| Difference                   | −9      | +25                    | −17     | +9      | +19     | −2          | +17      |
| National balance points      | 8       | 42                     | 0       | 26      | 36      | 15          | 34       |
A critique of national solidarity in transnational organ sharing in Europe

Foundation states, ‘In all deliberations and recommendations of the Ethics Committee the need and well-being of the patient (as well as the donor) is a key focus’. 137

The collectivist orientation of national balance points together with their weighty proportion in the overall kidney allocation score call for a more balanced approach to the allocation of kidneys. That approach would put the individual welfare of the donors and recipients of organs first, while also being sensitive to the collective good of increased local donation. In the final part of this article, I shall examine how such a regime could look and discuss some implications of adopting it.

IV. INDIVIDUAL WELFARE-ORIENTED TRANSMATIONAL ORGAN SHARING

In the preceding part of this article, I established that solidarity and the system of national balance points put the collective and collective welfare first, which may lead to unfair results for individual organ recipients and which violates the letter of international instruments on organ transplantation. In this part, I seek to find a more balanced approach that would put individual candidates and donors and their welfare first. To do so, I first examine an alternative system of organ ‘paybacks’ adopted in Scandiatransplant, another European transnational organ sharing organization. I conclude that the ‘payback’ system is not a satisfactory alternative to the system of national balance points since it is also based on the idea of solidarity and prioritizes collective welfare. Then I suggest several ways in which the system of national balance points can be improved in order to be more oriented toward individual welfare. Finally, I discuss several policy implications of adopting the individual welfare of the donors and recipients of organs as the primary principle of transnational organ sharing.

A. ‘Paybacks’ instead of national balance points?

Eurotransplant is not the only international organization in Europe that arranges transnational organ exchange. Scandiatransplant, founded in 1969 by the Nordic Council of Ministers, is a ‘collaborative non-profit organ exchange organization managed by the member transplant hospitals’ 138 in Denmark, Finland, Iceland, Norway, and Sweden. 139 Scandiatransplant maintains a common waiting list for transplantation 140 and, like Eurotransplant, attempts to maintain a balance of organs exchanged between participating transplantation hospitals. Unlike Eurotransplant, however, Scandiatransplant employs not a system of national balance points, but rather a system of ‘return obligations’, under which

[k]idneys, which are exchanged on basis of [HLA-typing criteria] must be “paid back”, and the return is aimed at being effected within six months, and if possible by a kidney.

137 Ethical Charter at 3. ‘Eurotransplant has established an Ethics Committee (ETEC) that is responsible for considering current ethical and legal issues in organ donation, allocation and transplantation that have a bearing on the day to day practice and collaboration within the Eurotransplant organization.’ Id. at 1.

138 Scandiatransplant, Articles of Association art. 3, Aug. 25, 1993, http://www.scandiatransplant.org/about-scandiatransplant/organisation/ArticlesofAssociationforForeningenScandiatransplant.pdf (accessed Dec. 9, 2017).

139 Scandiatransplant, About Scandiatransplant, http://www.scandiatransplant.org/about-scandiatransplant (accessed Dec. 9, 2017). None of Scandiatransplant member states is a member of Eurtransplant.

140 Scandiatransplant, Articles of Association art. 3.
of the same blood group as the one received. The organ offered in this way must be of a quality acceptable to the recipient center, regarding for instance technical quality, donor age and time of ischemia.\textsuperscript{141}

As this provision demonstrates, Scandiatransplant does not assign points in the kidney allocation score to the residents of donor and recipient medical centers. Instead, it demands that the recipient center ‘payback’ in kind for the kidneys it receives from other centers. Putting aside the ethical question of to what extent this quid pro quo kidney exchange at the institutional level raises concerns about the devaluation of parts of human bodies, I want to focus on a different issue. The Scandiatransplant approach to reaching an organ exchange balance raises the same ethical concerns about solidarity and individual welfare that arise with respect to the system of national balance points. Most significantly, it supplants the individual patient-based mechanism of organ allocation with a collectivist one. Under the system of kidney ‘paybacks’, the organ that is sent in return for the first one goes to a transplantation hospital than then redistributes the organ to a suitable recipient. In other words, the system of kidney ‘paybacks’ is based on the same fiction of ‘redistribution’ of organs that we saw with the system of national balance points (whereas in reality the organs are allocated to individual patients).

In this respect, the system of organ ‘paybacks’ adopted in Scandiatransplant, while promoting the collective welfare of transplantation centers, can disregard the interests of individual organ recipients. Therefore, if we seek an alternative to solidarity and the system of national balance points, it must lie elsewhere.

B. An alternative approach: individual welfare first

As my analysis demonstrates, solidarity in transnational organ sharing and the system of national balance points are based on and seek to promote the collective welfare of the communities understood as either nation states (Eurotransplant) or transplantation hospitals (Scandiatransplant). Putting collective welfare first violates the fundamental principle of organ transplantation (and medical aid more generally), according to which the individual welfare of donors and waitlisted transplantation candidates must be put first. This calls for a reform of the solidarity-based system of national balance points and organ ‘paybacks’ and the development of an approach that puts individual welfare first, as the international instruments on organ sharing unanimously declare.

An obvious way to develop that approach would be to get rid of solidarity and national balance points or organ ‘paybacks’ entirely, erasing them from the rules on transnational organ sharing. This, however, seems undesirable. First, solidarity does pursue a legitimate goal: maintaining acceptable levels of local donations. It may be true that in a possible future when Europe is genuinely (and not just politically and economically) united, individuals from different countries will think of their fellows around the continent as ‘fellow Europeans’ in the sense that they now think of their ‘fellow citizens’

\textsuperscript{141} Rules for Exchange of Kidneys from Deceased Donor within the Scandiatransplant Cooperation, Dec. 14, 2016. The Guidelines for Deceased Organ Transplantation of Non-Nordic Nationals within Scandiatransplant and the Use of Non-Nordic Organs for Scandiatransplant Recipients, May 1996, specify that the members of Scandiatransplant can ‘arrange cooperation agreements that include . . . the use of organs from non-Nordic countries . . . [provided those agreements] shall attempt to establish a balance between the number of organs made available to Scandiatransplant, and organs applied for transplantation of patients from [outside of Scandiatransplant]’. \textit{Id.} The Guidelines, however, do not specify how that balance can be reached.
as people who belong to the same community. The recent rise of nationalist sentiments in Europe suggests, however, that it will take significant time for that aspiration to become reality. In the meantime, rejecting solidarity can decrease local donations and make individual organ recipients worse-off, raising the same concerns of intertemporal justice I discussed earlier.

Second, solidarity arguably also plays another important role, which is compensating the local communities for the costs associated with local procurement of organs. If that is true, then rejecting solidarity would mean that Eurotransplant and Scandinavtransplant would have to bear the costs of compensating the transplantation hospitals for the organs they procure. Given the limited budgets of those international organizations, this might not be realistic.

Therefore, a complete rejection of solidarity is unrealistic and is likely to produce unethical results. A more feasible and balanced approach would be to keep the principle of solidarity and the underlying value of self-sufficiency and collective welfare in the procurement and allocation of organs, but place them second after individual welfare in the lexical ordering of the principles of transnational organ sharing. This approach, on the one hand, will be more loyal to the fundamental commitment of the individual welfare of the patient discussed above, and on the other hand, will factor in the collective welfare, which is also an important part of organ allocation. There are a number of ways to achieve that goal.

In the system of national balance points, the mechanism of how they are calculated can be changed. Recall that Wujciak and Opelz, who proposed including an exchange rate in the kidney allocation score, suggested the respective ‘value [to be] transposed into a point system of 0 to 100’.

This seems a reasonable and easily implementable solution. It is reasonable because the national balance points will not score so high as to outweigh the medical components of kidney allocation score. It is easily implementable because every time national balance points are calculated, the highest value (420 in the example with Belgium and Luxembourg given earlier) is taken as 100, the lowest as 0, and the values in between are adjusted proportionally. Another ‘arithmetical’ solution along the same lines could be to impose a cap of 100 on national balance points; this solution is less desirable because it lacks precision: all numbers of national balance points equal to or exceeding 100 will be the same.

Another way to change the way the system of national balance points works, in addition to changing the calculation mechanism, is to implement the measures mitigating the system’s negative impact on individual recipients, especially during transition periods. This can be especially relevant to the new members of Eurotransplant whose rates of local donations may be not as high as in the countries where those rates have already been balanced by the exchange system. Along those lines, the new Eurotransplant members could be required to achieve certain donation rates of certain organs which are specific to the populations of those countries before joining Eurotransplant.

One of the prerequisites for new members of Eurotransplant now reads, ‘The membership of Eurotransplant requires ... [a]n organ donation rate at the time of full membership of approximately 10 [per million population]. If this goal is not yet reached, it must be reasonable to assume—based on the development in organ donation over the

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142 Wujciak & Opelz, supra note 32, at 1514.
preceding years and the measures taken in this area—that a donation rate above 10 [per million population] will be achieved within the near future. These guidelines could be made more precise to reflect the particular situations of Eurotransplant candidate member states in terms of their populations and specific organs. Furthermore, Eurotransplant could also help new member states to reach these goals by entering into organ exchange agreements with them prior to full membership. The practice of entering into Preliminary Cooperation Agreements could be used for that purpose.

As far as the system of kidney ‘paybacks’ goes, it could be improved to take into consideration not only the issues of quality of kidneys acceptable for the transplantation hospital, but also the needs of the candidates awaiting transplantation in that hospital (with stronger emphasis on the latter). This would put individual allocation of kidneys before collective welfare.

Putting individual welfare of the donors and recipients of organs first is by no means a small step: it is a conceptual reorientation of the policies in transnational organ sharing from solidarity and collective welfare toward a more balanced approach. I believe that the proposed reform of the system of national balance point will not decrease the local donation rates or imperil the legitimacy of the local governments and their organ donation policies: as discussed above, the proposal does not suggest rejecting the national balance points and their underlying collective welfare in their entirety. By contrast, the proposal recommends limiting the weight of national balance points in the overall organ allocation score (as Wujciak and Opelz initially suggested), introducing more fine-tuned regulations of transition periods, and considering the well-being of individual recipients in organ ‘paybacks’. None of these measures seems likely to discourage individuals from donating their organs. At the same time, the proposed shift from collective to more individual welfare-oriented allocation of organs does entail a number of consequences that might range beyond than the transnational sharing of organs per se. In what follows I briefly note three consequences relevant to the problem of distributive justice in organ transplantation.

First, basing the system of organ sharing on individual welfare implies a more permissive attitude toward the organ market, provided that the market does not harm the donors and recipients of organs. The idea that organs are commensurate with each other is already strongly present in national and transnational regulations on organ transplantation. Nationally, several countries offer priority in organ waiting lists for living

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143 Eurotransplant, Prerequisites for New Members, https://eurotransplant.org/cms/index.php?page=prerequisites (accessed Dec. 9, 2017).
144 Eurotransplant, Accession Procedure, https://eurotransplant.org/cms/index.php?page=new_members (accessed Dec. 9, 2017).
145 I also note that a reform of the system of national balance points and the problem of a possible decrease in local donation rates it presents also raise a more general issue of whether the norms should follow the empirical reality of the world or attempt to change it. In this particular case, one could argue that a more individual welfare-oriented system of transnational organ sharing can in the end increase the donation rates because it will strengthen the sense of community among the individuals living in different Eurotransplant member states. See also Guido Calabresi, Do We Own Our Bodies?, 1 HEALTH MATRIX 5, 15 (1991) (‘If, instead, we say that body parts belong to those who need them, we focus on society and on its values in a communitarian way. This in turn might lead us to think of all of society more as one family. Interestingly, it is precisely within families that donations of body parts are most common today.’). While this argument is in theory subject to the same intertemporal justice criticism as the existing system, see supra note 130 and accompanying text, I believe that in practice it is less susceptible to such critique for reasons articulated above.
donors and allow for paired organ donations. Internationally, there exists the system of organ ‘paybacks’ discussed above. These approaches considerably compromise the sanctity of the human body—one of the rationales that seems to underlie the prohibition on evaluating organs in monetary terms and raises worries about the intrinsic corruption of organ markets. Indeed, if one believes that the human body and its parts are sacred, one should also be against trading one sacred object for another (an organ for an organ), and yet the reciprocity-based norms on the procurement and allocation of organs do just that. At the same time, if we allow reciprocity to exist in the system of organ transplantation and if we build that system from the premises of individual welfare, it would not be conceptually wrong to make the next step and further circumscribe the argument about the sanctity of the human body, arguing that for the sake of welfare of individual recipients reciprocity is not only about in-kind consideration in paired kidney donations, but also about monetary compensation for organs. This line of reasoning would lead to regulated markets of organs, national and transnational.

Second, individual welfare in transnational organ sharing will result in a more cosmopolitan and less statist vision of solidarity and the international community. Individual welfare commands that the decisions about the procurement and allocation of organs are to be made primarily with reference to the well-being of individual donors and recipients irrespective of their nationality. Therefore, the idea of ‘community’ among the organ-sharing members is expected to expand from the nation states to the conglomerate of countries, such as Eurotransplant and Scandiatransplant. As the integration ties between the countries tighten (which can be a lengthy process), donors can be expected to start thinking of recipients from other countries as of individuals from the same community, which is important for the preservation of local donation rates. Individual welfare has the potential for reaching a deeper integration between member states than the principle of national solidarity and the collective welfare principle it is based on.

Finally, individual welfare implies more active litigation of organ recipients to protect their well-being. While it is unlikely that the courts would be willing to consider individual claims about the allocation of organs based on purely medical criteria, it is

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146 See eg OPTN, Policy 8: Allocation of Kidneys §§8.3, 8.5.E, https://optn.transplant.hrsa.gov/media/1200/optn_policies.pdf#nameddest=Policy_08 (accessed Dec. 9, 2017) (specifying that the candidates who are prior living donors get additional four points to their allocation score); see also Zhongguo Renti Qiguan Fenpei yu Gongxiang yu Ganzang yu Shenzang Yizi Hexin Zhengce [Chinese Basic Principles of Allocation and Sharing the Human Organs and the Core Policy on Liver and Kidney Transplantation] (promulgated by the Ministry of Health on Dec. 27, 2010, effective Dec. 27, 2010) art. 3 §3 ¶3.2.

147 See 42 U.S.C.A. § 274e (West) (‘It shall be unlawful for any person to knowingly acquire, receive, or otherwise transfer any human organ for valuable consideration for use in human transplantation if the transfer affects interstate commerce. The preceding sentence does not apply with respect to human organ paired donation.’).

148 See I. Glenn Cohen, Regulating the Organ Market: Normative Foundations for Market Regulations, 77 L. & CONTEMP. PROBS. 74, no. 3 (2014).

149 See I. Glenn Cohen, The Price of Everything, the Value of Nothing: Reframing the Commodification Debate, 117 HARV. L. REV. 689, 701–2 (2003) (discussing the ‘width’ of ‘spheres of valuation’ of different goods).

150 Cf. Kiran Sheffrin, Establishing an International Organ Exchange through the General Agreement on Trade in Services, 38 BROOK. J. INT’L L. 829 (2013) (arguing in favor of international organ exchange based on the principles of welfare and reciprocity).
more plausible that the courts can (and should) step in to protect the individual recipients if their equality is violated. For example, if a transplantation hospital refuses to put a child with mental impairments on a waiting list for a kidney, or a political figure cuts in front of the line and obtains a multiple organ transplant (for which other patients have to wait longer), the individual recipients should be able to go to court and have the judges adjudicate their claims about the violation of equality in organ allocation. Another example of individual welfare-based litigation would be whether medical criteria of organ procurement and allocation have been developed with the intention to discriminate against a particular social group (e.g., racial or ethnic minorities or people with disabilities). In those cases, the courts should be able to step in and, if the malicious intent of those who developed those criteria is proved, protect the individual welfare of the members of vulnerable social groups.

V. CONCLUSION

In this article, I have presented a descriptive analysis of national solidarity in the transnational sharing of organs in Europe and concluded that solidarity as a principle of distributive justice was based on a statist understanding of community and collective welfare. I also demonstrated that the leading theories of global justice cannot give a principled approval to solidarity. (An intermediate theory of global justice would approve solidarity only if certain conditions are met.) Finally, I showed that the regime of solidarity in transnational organ sharing is based on fictions of questionable utility and suggested how the solidarity-based regime of transnational organ sharing can be improved to prioritize the individual welfare of organ donors and recipients. The reformed regime not only would be more faithful to the letter and spirit of international agreements on organ transplantation, but also has the potential to deepen the integration between participating states, to open up regulated organ markets, and to empower individual donors and recipients to adjudicate their equality.

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151 Sara Frank, *Eligibility Discrimination of the Intellectually Disabled in Pediatric Organ Transplantation*, 10 *Health & Biomed. L.* 101 (2014) (discussing the case of Amelia Rivera who was allegedly denied placement on a waitlist for an organ because of her intellectual disability).

152 Boyce Rensberger, Pennsylvania’s Gov. Casey Has Heart—Liver Transplant, *Washington Post* June 15, 1993, https://www.washingtonpost.com/archive/politics/1993/06/15/pennsylvanias-gov-casey-has-heart-liver-transplant/ac5bc25e-f2c6-433e-b8d5-cb6a6619ebdf/?utm_term=.be2c0e465b21 (accessed Dec. 9, 2017) (discussing the case of a state governor obtaining heart and liver for transplantation ‘only a day after doctors determined that the Democratic governor needed both transplants and just hours after his name was entered on a waiting list for donor organs’).