Author’s response to reviews

Title: The Reuse of Cardiac Organs in Transplantation: An Ethical Analysis

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Author’s response to reviews:

Dear Editor,

We are sincerely grateful for your careful re-examination of our manuscript and extremely helpful comments. We have revised substantially our manuscript, entitled “Reuse Cardiac Organ Transplantation: An Ethical Analysis” (METH-D-18-00050), according to the Reviewers’ comments. We look forward to hearing from you regarding the revised version of our manuscript.

Sincerely yours,

Akira Akabayashi

Original comments of Reviewer 1, Dr. Tobias Bauer (red font), and our responses (blue font)
An interesting article inquiring into the ethical permissibility of the reuse of a transplanted heart. From the perspective of consent to the reuse given or withheld by the first donor (FD) and the first recipient / second donor (FR/SD) respectively, the authors start by constructing four possible scenarios (chapter 3.1): (1) both FD and FR/SD consent, (2) FD consents, FR/SD does not consent, (3) FD does not consent, FR/SD consents, (4) neither FD nor FR/SD consent. They then discuss a variety of approaches and concepts, arguing for each scenario in favor of (chapter 3.2) and against (chapter 3.3) the ethical permissibility of the reuse of a transplanted heart. Finally (chapter 3.4), the authors argue in favor of the ethical permissibility of organ reuse by critically reviewing the counter-arguments presented previously.

The approaches presented and the ethical assessment of the permissibility of organ reuse elaborated on by the authors seem to constitute an original contribution in the field of transplantation ethics, which will certainly stimulate further inquiries into this topic. The article, therefore, deserves to be considered for publication.

However, in the humble opinion of the reviewer, the arguments brought forward to argue for the impermissibility of organ reuse in case both FD and FR/SD consent (chapter 3.3, pattern 1) demand further revision by the authors in two respects.

First, as was already partially pointed out in the review on the first draft of this article, the presumed possibility of a lack of "social consensus" and the negative perception of the reuse of organs as an act which evokes "disgust" leaves a rather speculative impression. Therefore, the citation of relevant data or literature (if available) to underpin these assumptions, or - for example - a demonstration of why problems of "social consensus" and negative perception of "normal" organ transplantations are amplified in the case of the reuse of transplanted organs, would certainly make this argument more plausible. (This critique also applies to the issues presented regarding identity.) Second, the ethical relevance of the possibility that was postulated regarding a lack of social consensus and a negative, "disgust"-evoking perception of organ reuse
still seems vague. Obviously, these factors must be taken into account in a discussion on the policy-level regarding the problem of organ reuse. Their relevance to the ethical evaluation of this problem, however, seems to require some sort of justification.

As "disgust toward organ recycling" is one of the arguments the authors finally (chapter 3.4) attempt to refute in order to argue for the permissibility of organ reuse, a strengthening of this argument's initial presentation (in chapter 3.3) would be of further benefit to the persuasiveness of the article.

--> We greatly thank Dr. Bauer for his thought-provoking comments. Taking your comments into consideration, we have strengthened our argument about Pattern 1 in Chapter 3.3.

In the 2nd version, we wrote:

Whether social consensus on this “organ recycle/reusing” has been established or not remains unclear. Some may perceive “recycle/reusing” negatively. If the image linked to RCOT is that of a heart that leaves the donor’s body and wanders from one recipient to the next, does this evoke a sense of disgust?

Indeed, as Dr. Bauer points out, it is difficult to present empirical data on disgust, and we have performed a philosophical discussion of this matter instead. We still believe that recycling an organ multiple times has the inherent capacity to evoke the emotion of disgust. One reason for this is that the instrumentalization of these organs progresses, paving the way for the organs to be assigned a price, and possibly even sold in organ trafficking. Another reason is the personalization of the organs that have become instrumentalized. With regard to this latter reason, we use a historical example to illustrate our point in the philosophical discussion.
To that end, we added the following text as an additional paragraph in the revised manuscript (lines 307-326).

“There are at least two reasons supporting the argument that organ recycling creates emotional resistance. The first reason relates to instrumentalization of donated organs. Through the continual recycling, the organ transforms from a valuable gift from the donor to the recipient, to (eventually) an instrumentalized object, or thing. As instrumentalized objects are things that can be price-tagged, the instrumentalization of organs leads directly into organ trafficking. As discussed later on, our society does not allow organ trafficking, and organ trafficking evokes emotional resistance within us. The second reason creating emotional resistance toward organ recycling is the personalization of things (or instrumentalized objects). Through its continual recycling, the history of each owner accumulates within the particular organ. In other words, the organ will inevitably contain its own unique history. This means that the organ will be shouldered with some form of inherent memory, which would form what might be called a ‘pseudo personality.’ One historical example that may help to explain this concept further is that of the Hope Diamond. While this particular gem currently resides in the Smithsonian National Museum of Natural History, it has been owned by many human beings in the past. Many of the prior owners were known to have lived tragic lives, and thus, the Hope Diamond has come to be viewed as a personalized object that brings about a curse to its owner. This same concept may be said to apply to the reuse of organs as well. Notably, as discussed later, the unique memory of the organ could potentially damage the identity of the recipient as the new owner.”

We feel that this revision greatly strengthened our argument on organ recycling. We hope that these replies and revises are satisfactory to you. We are also ready to revise our manuscript further if you feel we need to do so. Once again, thank you for your careful review.

Original comments from Reviewer 2, Dr. David Rodriguez-Arias (red font), our responses (blue font), and text from our first revised manuscript (black font)
We greatly thank Dr. Rodriguez-Arias for his thought-provoking comments. Taking your comments into consideration, we have revised the manuscript as follows. Please also check our replies to your comments.

[1]

163 Our hypothesis is as follows: RCOT is either ethically permissible or impermissible.

--> This is hardly a hypothesis, at least in a scientific meaning. The authors reduce the morality of RCOT to the problem of consent, even though they also consider other aspects.

→ Using the term “hypothesis” was indeed inappropriate. In the revised version, we use the term “working premise” as an alternative. We have taken the approach to set this premise in place and preliminarily apply the two-value theory. (revised manuscript, line 163)

[2]

179 are unknown, an implicit “Agree” status is assumed for the sake of convenience,

180 according to the ‘opt-out’ principle.

--> This is not granted, and inconsistent with laws in both Japan and the US (both have opt-in systems): the authors need to clarify what they mean by "convenience" (e.g. convenient for whom?, on what grounds?). Assuming this is problematic, for reasons considered below.
This statement was included as part of the discussion on unknown instances, and is fairly trivial in light of the overarching ethical discussion. As it may take away from the overall understanding of the main point, we decided to remove it from the text. (revised manuscript, lines 178-180)

[3]

184 In the case of Pattern 1, RCOT is ethically permissible from the perspective of donor consent.

--> I would suggest to treat the 4 patterns in order (1,2,3,4)

--> In the interest of prioritizing the flow of the argument, we wish to present the 4 patterns in a 1-3-2-4 order, as we feel that this is easiest for the reader to follow. Our argument on Pattern 3 has as its background more classical philosophy, while Pattern 2 is argued with an understanding of the background information from the argument from Pattern 3. Thus, with regard to this portion, we would like for the order to remain as originally presented.

[4]

190 In addressing this problem, a philosophical argument about the aforementioned "property rights," along with a natural right theory or a philosophical/ethical theory based on self-ownership, might help establish a foothold.

--> The whole analysis may be considered as flawed, as dead individuals do not usually have rights. What type of right are you talking about? Moral rights, legal rights? If legal: where stated.
If moral, on what ontological, or moral grounds you claim the existence of such rights? I don't think Locke was meaning dead humans.

➔ Thank you for pointing this out. The rights noted here are legal rights and are based on Locke’s philosophy on property rights. Needless to say, the already deceased FD does not have any ownership rights to their organ.

[5]
214 Here we use the gift concept and heritage concept as candidates for such ethical arguments.

➔ This is a totally new grounding framework which is inconsistent with the property rights framework used until now. The authors may need to clarify which of these arguments are just arguments that somebody could use, and which are THEIR own arguments. It is a bit confusing, and it gives the appearance of inconsistency.

➔ The gift and heritage concepts noted here deal with argument points that cannot be covered by the property rights framework that is based on existing self-ownership. We think that this point represents a passage which showcases the novelty of this paper. The gift concept incorporates the perspective of virtue, and the heritage concept uses the ideas of communitarianism.

[6]
219 As a token of appreciation, the receiver might consider giving that very gift they received to someone else as "a favor for favor," when put in an appropriate
221 position. In the case of heart transplantation,

---> appreciation can be manifested in many other ways. The argument is stretched beyond reasonableness. It can be argued that gifts must be unconditional (otherwise they are rental, lending, or other transactions) If I accept a gift, it could be on the condition that I'm not requested to give it to another person). It could also be that if the giver knows that I don't accept conditional gifts she might not be willing to do that gift to me. This would require being explicit about what the giver would want to do if she knew that. Presuming either that she would accept or that she would not accept is arbitrary. Only with consent would that issue be solved. Here is another argument not to interpret, out of conveniency, that absence of expressed preferences regarding RCOT, means agreement.

Gifts can certainly include those that are unconditional, and in general, that is the norm. However, here we are developing an argument about virtue. Therefore, we are advocating that ‘appreciation’, ‘a favor for favor’, and ‘gratitude’ are key words that are concepts deeply rooted in virtue ethics. In other words, we argue that even if a gift is unconditional, and returning it is not a duty, returning a gift for a gift is, from the perspective of virtue, a ‘meritorious act’. In order to clarify further this case when it is unconditional, we inserted the term “supererogatory” into the main text. (revised manuscript, line 229)

[7]

229 However, the gift concept described here goes beyond the idea of duty, and embodies

230 the concept of virtue ethics. Therefore, while FR/SD is neither going against the law nor

231 breaching their duty by denying consent for RCOT,

----> I find this distinction important and interesting.
We appreciate your thoughtful comment on this.

Another direction to take is to regard organs as an entity that is closer to "heritage," among all sorts of public property. In fact, with respect to a certain kind of heritage again this is a new framework: do the authors endorse it? Please clarify

Thank you for this comment as well. As noted above, this argument brings out the novelty of the present paper and incorporates ideas from virtue ethics and communitarianism.

stating that RCOT is ethically permissible is equivalent to saying that donor intention is "donors" in plural, may be more accurate

Thank you for that suggestion. We have changed the wording accordingly. (revised manuscript, line 245)

This claim may seem intuitively incorrect. However, it is possible to justify RCOT even in the case of Pattern 4, according to the nature of
249 organs as public property. For instance, a policy could be adopted to allow donated
250 hearts to be handled as a sort of public property ("public property theory"),

--> this should be better phrased as an organ conscription policy. Again, It is unclear which of
all these arguments the authors endorse, and which they are merely stating that reasonable people
could endorse

➔ The term “public property” seems to possess more universality, so we will change the
wording accordingly. That said, as you pointed out, we do feel that the reader should be warned
that this way of thinking can lead to that of “organ conscription”. However, as we bring up the
heritage concept, the point that the organ could have public property-like aspects could
potentially be supported. We touch on this in the Conclusion section.

[11]

254 This more radical position requires FD's
255 consent to be interpreted as "comprehensive" (i.e., to have their organs transplanted into
256 multiple unspecified recipients).

--> Disagree: the whole idea of consent is abandoned with organ conscription

➔ Of course, there is the possibility that FD will not consent to the organ transplantation. However, once the consent is given, this means that it is not a tiered consent, in which, for example, they consent to all but re-transplantation. Therefore, we feel that bringing in the concept of organ conscription here may be a bit too strong.
Moreover, this position also requires the establishment of a third-party organization (e.g., United Network for Organ Sharing (US), JOTN, etc.) for distributing FD’s heart fairly and impartially.

--- not more than the other positions

Yes, as you point out, even in other positions, a third-party organization (e.g., United Network for Organ Sharing (US), JOTN, etc.) becomes necessary. This portion is not a necessary part of the text, so we have removed it. (revised manuscript, lines 256-257)

Whether social consensus on this "organ recycle/reusing" has been established or not remains unclear. Some may perceive "recycle/reusing" negatively.

-- this is not plausible to me. Human transplant is already a recycling. Second recycling do not raise qualitative distinct moral issues, in my view. It is just a matter of degree. The authors seem to think otherwise, but they do not justify this. This is crucial for this argument to hold.

As responded above to Reviewer 1, who had similar concerns, we have revised the text to fill in some deficiencies of this argument. With regard to recycling an organ multiple times, we still feel that the established argument should focus on the emotion of disgust. Of course, an
argument based on disgust would contain some weaknesses, so we do not commit to that in the end. However, we did add a point that would enhance the plausibility of the argument that is based on disgust. To that end, we propose two new reasons to explain why disgust may be evoked. One is that the instrumentalization of organs would be promoted, which would potentially lead to the organs being assigned a price, and then to organ trafficking. The other is the personalization of the organ that has been instrumentalized. With regard to this, we use an example of a historical relic to conduct an ethical discussion.

We added the following paragraph as new text to address this: (revised manuscript, lines 307-326)

“There are at least two reasons supporting the argument that organ recycling creates emotional resistance. The first reason relates to instrumentalization of donated organs. Through the continual recycling, the organ transforms from a valuable gift from the donor to the recipient, to (eventually) an instrumentalized object, or thing. As instrumentalized objects are things that can be price-tagged, the instrumentalization of organs leads directly into organ trafficking. As discussed later on, our society does not allow organ trafficking, and organ trafficking evokes emotional resistance within us. The second reason creating emotional resistance toward organ recycling is the personalization of things (or instrumentalized objects). Through its continual recycling, the history of each owner accumulates within the particular organ. In other words, the organ will inevitably contain its own unique history. This means that the organ will be shouldered with some form of inherent memory, which would form what might be called a ‘pseudo personality.’ One historical example that may help to explain this concept further is that of the Hope Diamond. While this particular gem currently resides in the Smithsonian National Museum of Natural History, it has been owned by many human beings in the past. Many of the prior owners were known to have lived tragic lives, and thus, the Hope Diamond has come to be viewed as a personalized object that brings about a curse to its owner. This same concept may be said to apply to the reuse of organs as well. Notably, as discussed later, the unique memory of the organ could potentially damage the identity of the recipient as the new owner.”
We feel that the revisions above have strengthened the argument on organ recycling, and have increased the quality of our argument.

[14]

303 If the image linked to RCOT is that of a heart that leaves
304 the donor's body and wanders from one recipient to the next, does this evoke a sense of
305 disgust? If so, is this disgust something we should overcome, as it arises simply because
306 we are unaccustomed to the concept of RCOT?

--> if so, they would reject transplantation medicine altogether. Is there any evidence of people accepting OT but rejecting organ retransplantaiton for intrinsic or conceptual issues (rather than contingent and practical issues, related to higher risks, for example?) On the other hand, disgust is a bad type of argument and a problematic basis for ethical deliberation. Of course, people's sentiments and emotions, are to be taken into account if you are the legislator (you cannot activate a protocol that creates fear or disgust to the majority of the concerned population) However, it is not an argument. Gut feelings are usually arbitrary and often unacceptable: disgust is what nazis felt about jews, for instance.

→ Thank you for clarifying these issues here. Of those that you pointed out, the first one, i.e., the conceptual issues with the difference between the first (original) organ transplantation and the second organ retransplantation, we have addressed this immediately above, and have added on to our discussion (revised manuscript, lines 307-326). To the second point, i.e., the arbitrariness and unacceptability of gut feelings, we would agree with your comments here, and refer you to the third paragraph of Section 3.4 (Judgment), where we address these.

[15]
309 However, some might feel disgust
310 when they hear the expression "recycling human organs," at least at this time.

--> Any empirical evidence of this?

→ As noted to Reviewer 1, who had the same concern, it is difficult to produce experiential data on this. Instead, we conducted a philosophical discussion.

[16]
312 difference is likely rooted in the notion that "organs are precious." This notion stems
313 from the idea that as they are part of the human body, organs should be accorded respect
314 in a moral sense; hence, they must not be recycled.

→ I would rather talk about "dignity" of human body parts. But this has three problems. First, dignity is often referred to as the property of non instrumentalizable entities (Kant). This has been rejected by Macklin and others, as a blurry and ultimately unuseful concept. Second, it is awkward to say that using an organ for first transplantation is not instrumentalizing the body, but reusing that organ for a second retransplantation amounts to not respecting that body. You need an argument to support this. Finally, somebody (myself, for example) could claim that the best way to respect a body would be to reuse it. It i

→ We agree with your comments. Our argument here is that organs are not simply “things”; rather, they possess a certain quality that demands respect. We want to express this by stating that “organs have some pseudo personality” (revised manuscript, line 319). Of course, this type
of personality can only ever be ‘pseudo’. However, we hypothesize that this is the reason why an aversive emotion is evoked in response to the idea of recycling organs the way we recycle paper. We would also completely agree with the idea that the best way is to reuse these highly valuable organs. In our conclusions, while taking into consideration the special status of “heritability” of organs, we argue that reusing them as public property, and as something with heritability, is not only permissible, but in fact desirable.

[17]

318 the identity of the self has been discussed previously [31]. This concern is common to 319 normal multiple cardiac retransplantation; that is, frequent exchanges of organs may 320 make the boundary of the self unclear

--> again, it can be argued that this is a matter of degree: if RCOT compromises personal identity, then heart transplant does too. If you reject one, but not the other, you need to provide better reasons for why there is a qualitative difference -not just a quantitative one- among the two

→ As you state, this is a matter of degree. However, we think it is possible that quantitative changes (repeated changes) can bring about qualitative changes. For example, it is possible for repeated dripping of small drops of water to suddenly, one day, cause a massive boulder to break away and fall from the side of a cliff. However, what we are advocating here is that these changes are all associated with qualitative identity/sameness of one’s character, and that this is not as important to our concept of identity/sameness as is quantitative identity/sameness; i.e., we develop the argument that it is an acceptable change in section 3.4 (Judgment).

We hope that these replies and revises are satisfactory to you. We are also ready to revise our manuscript further if you feel we need to do so. Once again, thank you for your careful review.