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Incentives and Ethics in the Economics of Body Parts

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Abstract

Research shows that properly devised economic incentives increase the supply of blood without hampering its safety; similar effects may be expected also for other body parts such as bone marrow and organs. These positive effects alone, however, do not necessarily justify the introduction of payments for supplying body parts, because these activities concern contested commodities or repugnant transactions. Societies may want to prevent these transactions even if they increase supply, because of ethical concerns. When transactions involve contested commodities, therefore, there often is tension between the efficiency-enhancing effects of trades mediated by a monetary price and the moral opposition to the provision of these payments. In this article, I discuss the current debate on the role of moral repugnance in controversial markets, with a focus on markets for organs, tissues, blood, and plasma. I then report recent research into the trade-offs that individuals face when forming their opinions about how a society should organize certain transactions.

Keywords

Donation of organs, tissues, etc.--Moral and ethical aspects; Donation of organs, tissues, etc.--Economic aspects

Cover Page Footnote

I thank Mitu Gulati, Kim Krawiec and Poonam Puri for inviting me to the Symposium “Law and Markets: Regulating Controversial Exchange” at the Osgoode Law School of York University, and for providing insightful comments to a previous draft of this article. I also benefited from the feedback of the participant to the Symposium, and from conversations with Al Roth about the topics that I discuss here. The article builds on my joint work and almost daily interactions with Julio Elias and Mario Macis; I want to express my gratitude to them, and to claim only partial ownership over (but full responsibility for) what I wrote. In addition to the work with Julio and Mario, I refer to other research done with Mario, and to work in collaboration with Victor Iajya, Robert Slonim, and Sarah Stith. The content and structure of this article partially follows a cycle of lectures that I gave at the Center for Economic Studies of the Ludwig Maximilian University of Munich in July 2017; I am thankful for the hospitality of the University and the Center during my visiting period, and to the colleagues and students there for their comments. I dedicate this article to the memory of my friend Julia Fletcher, whose life could have been longer if a bone marrow match were found for her.

Special Issue

Incentives and Ethics in the Economics of Body Parts*

NICOLA LACETERA†

Research shows that properly devised economic incentives increase the supply of blood without hampering its safety; similar effects may be expected also for other body parts such as bone marrow and organs. These positive effects alone, however, do not necessarily justify the introduction of payments for supplying body parts, because these activities concern contested commodities or repugnant transactions. Societies may want to prevent these transactions even if they increase supply, because of ethical concerns. When transactions involve contested commodities, therefore, there often is tension between the efficiency-

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enhancing effects of trades mediated by a monetary price and the moral opposition to the provision of these payments. In this article, I discuss the current debate on the role of moral repugnance in controversial markets, with a focus on markets for organs, tissues, blood, and plasma. I then report recent research into the trade-offs that individuals face when forming their opinions about how a society should organize certain transactions.

Des études montrent que les incitations économiques, à condition d'être bien pensées, accroissent l'offre de sang sans pour autant compromettre sa sûreté; un constat similaire peut être dressé concernant d'autres parties du corps humain comme la moelle osseuse et les organes. Néanmoins, ces effets positifs, à eux seuls, ne justifient pas forcément la mise en place de paiements en échange de parties du corps, dans la mesure où de telles transactions concernent des marchandises contestées ou impliquent des pratiques répugnantes. Une société peut souhaiter, pour des raisons éthiques, empêcher ces transactions tout en accroissant l'offre. Lorsque les transactions se rapportent à des marchandises contestées, les gains d'efficacité des échanges subordonnés à un prix monétaire entrent souvent en conflit avec l'opposition morale à ces paiements. Dans cet article, j'examine le débat actuel sur le rôle de l'aversion morale au sein des marchés controversés, en mettant l'accent sur les marchés des organes, des tissus, du sang et du plasma. Je présente ensuite des recherches récentes sur les arbitrages auxquels font face les individus lorsqu'ils réfléchissent à la manière dont une société devrait organiser certaines transactions.

I HAVE SPENT THE LAST DECADE studying the economics of body parts and, in particular, individuals' motivations for donating blood, tissues, and organs. There are two main reasons for my interest in this topic. First, although the donation of blood and organs involves organizations, governments, and millions of people, there is a systematic supply shortage. The American Association of Blood Banks estimates that about 6.8 million volunteers donated blood in the United States in 2013, with about 13.6 million units of whole blood and red blood cells collected.[1] Canadian Blood Services collects over 900,000 whole blood donations every year.[2] And yet, inventories often fall below the safety levels necessary to guarantee the adequate treatment of many conditions.[3] This is

1. American Association of Blood Banks, "Blood FAQ," online: <www.aabb.org/tm/Pages/bloodfaq.aspx#a1>.
2. Canadian Blood Services, "What Happens to YOUR Donation" (2013), online: <www.blood.ca/sites/default/files/blood/donating-blood/WHTYD_brochure_EN.pdf>.
3. Kieron Lang, "Canada's blood supply hits 6-year-low, prompting donor appeal," *CTV News* (30 September 2014), online: <www.ctvnews.ca/health/canada-s-blood-supply-hits-6-year-low-prompting-donor-appeal-1.2031337>.

exacerbated by the fact that supply is seasonal whereas demand is stable, and by the fact that blood cannot be stored for more than a few weeks.[4] In lower-income countries, shortages are even more severe and so are their health consequences.[5] In Canada, more than 4,500 people were waiting for an organ transplant in 2014, but only 2,356 organs were transplanted and 278 people died waiting for a transplant.[6] In the United States, around 17,000 kidney transplants occur every year, against an annual need of 35,000—a shortage that, over time, produced a waiting list of over 100,000 patients.[7] The average wait time for a transplant is also increasing (it is now over 4 years) and soon it will be longer than the life expectancy of people with kidney failure.[8] Estimates indicate that the social benefits of a kidney transplant are $1.1 million per kidney recipient if we add the value of the increased, quality-adjusted life expectancy.[9]

The second reason for my interest lies in the peculiarity and complexity of the motivations that lead people to donate blood, consent to donate their organs when they die, and even donate certain organs (such as a kidney or part of the liver) while alive. Of course, altruism is a powerful driver of the decision to perform these acts. Other-regarding preferences can both reflect concern for the well-being of others (relatives or strangers) and at the same time directly increase the well-being of the donors (a sort of 'warm glow' effect).[10]

Although altruism is a powerful motivator, the frequent shortages of blood and the large imbalance in the supply and demand of organs suggest that it

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4. *Ibid*. For the typical shelf life of blood, see Nicholas Bakalar, "The Shelf Life of Donor Blood," *The New York Times* (11 March 2013), online: <well.blogs.nytimes.com/2013/03/11/the-shelf-life-of-donor-blood>.
5. World Health Organization, "The Global Need for Safe Blood" (14 June 2006), online: <www.who.int/worldblooddonorday/campaignkit/WBDD_GlobalNeed_English.pdf>.
6. Government of Canada, "Blood, organ and tissue donation" (26 January 2017), online: <www.healthycanadians.gc.ca/diseases-conditions-maladies-affections/donation-contribution-eng.php#a21>.
7. P J Held et al, "A Cost-Benefit Analysis of Government Compensation of Kidney Donors" (2016) 16:3 Am J Transplant 877 at 880. See also US Department of Health & Human Services, "Organ Procurement and Transplantation Network" (2017), online: <optn.transplant.hrsa.gov>.
8. AJ Matas et al, "OPTN/SRTR 2012 Annual Data Report: Kidney" (2014) 14:51 Am J of Transplantation 11.
9. See Held, *supra* note 7 at 880.
10. James Andreoni, "Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving" (1990) 100 Econ J 464. In the case of directed donations, *i.e.*, to loved ones, other motivations also arguably move individuals. For example, donating a kidney to a spouse will increase the donor's welfare due to both the happiness of having a healthier loved one and the fact that the spouse then is more likely to contribute to the household income.

alone may not be enough to satisfy societal needs. A natural question is therefore whether other types of incentives, such as those provided by economic or material rewards, might lead to an increase in supply. For a long time, however, the prevailing opinion was that the addition of these extrinsic incentives would not be effective and could actually be counter-productive.[11] How is this possible?

In a book that became very influential in academic and policy circles, Richard Titmuss provided the basic theoretical framework for extrinsic incentives motivating people to donate blood.[12] Discussing different systems of blood procurement for transfusion, Titmuss claimed that a system based on payments would attract donors with less desirable characteristics, particularly poorer individuals in greater need of those rewards who would be more likely to carry transmissible diseases such as hepatitis.[13] This "adverse selection" effect would likely reduce the amount of blood actually available for transfusion and the overall quality of the blood supplied.[14] Titmuss also argued that offering material rewards would crowd out people who are motivated to donate for altruistic reasons, rather than enhancing these intrinsic incentives.[15] Several studies on blood donations provided evidence that has been interpreted as supporting Titmuss's claims. Surveys and laboratory experiments documented a negative impact of compensation on the willingness of individuals to donate. Studies also found that people who were more responsive to economic incentives were more likely than others to report behaviors or disease histories that would make them ineligible to be donors.[16]

It was in reaction to these studies, based largely on relatively small samples and relying on stated behavior rather than actual responses to incentives, that my coauthors and I set out to collect evidence from various contexts about actual responses of blood donors. Our evidence, based both on observational data and on randomized field trials in multiple environments and in collaboration with several blood banks and donor organizations, showed that carefully designed

11. See *e.g.* Richard M Titmuss, *The Gift Relationship: From Human Blood to Social Policy* (New York: George Allen and Unwin, 1971) [Titmuss, *The Gift*].
12. *Ibid*.
13. *Ibid* at 117, 119.
14. *Ibid* at 117.
15. *Ibid* at 223.
16. See Nicola Lacetera, Mario Macis & Robert Slonim, "Economic Rewards to Motivate Blood Donations" (2013) 340:6135 Sci 927 [Lacetera, Macis & Slonim, "Economic Rewards"]. See also Nicola Lacetera & Mario Macis, "Paid vs. Volunteer Donations: An Analysis of the Behavioral and Ethical Issues around Donor Incentives" in Ronald E Domen, ed, Ethical Issues in Transfusion Medicine and Cellular Therapies (Bethesda, MD: AABB Press, 2015) [Lacetera & Macis, "Paid vs. Volunteer"].

rewards (from t-shirts to gift cards to time off work) increase blood supply without negative consequences on the quality of donors and the safety of blood, while still remaning generally cost-effective.[17] In an additional study, we showed that certain incentives—such as tax benefits and leave from work—to organ and bone marrow donors in specific US states had a positive effect on the donation of bone marrow, though not on organ donation.[18]

Taken together, the evidence suggests that economic incentives would provide a powerful and relatively simple tool to enhance blood donations and potentially also the donation of other body parts. Gary Becker and Julio Elías, for example, estimate that paying organ donors $15,000 to $30,000 would eliminate the waiting list for transplants within a few years.[19]

But is research into the behavioral effects of economic incentives for blood or organ donations all that we need to provide insights for policy and law? Is this positive and cost-effective response to incentives enough to recommend the use of economic rewards and even outright payments to blood and organ donors?

The most recent steps in my intellectual journey increasingly convinced me that the answer to these questions is negative. Conversations and correspondence following the publication of our work suggested that providing rewards for the provision of body parts might conflict with deep moral beliefs, even in the presence of a positive behavioral effect. After all, while societies rely on markets and price-mediated mechanisms for the provision of many goods and services, they also regulate and ban many trades because they consider them morally unacceptable, especially if they involve payment—and sometimes regardless of the potential benefits that the parties involved might derive from those trades.

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17. Lacetera, Macis & Slonim, "Economic Rewards," *supra* note 16. See also Lacetera & Macis, "Paid vs. Volunteer," *supra* note 16.
18. Nicola Lacetera, Mario Macis & Sarah S Stith, "Removing Financial Barriers to Organ and Bone Marrow Donation: The Effect of Leave and Tax Legislation in the US" (2014) 33 J Health Econ 43. See also Paula Chatterjee et al, "The Effect of State Policies on Organ Donation and Transplantation in the United States" (2015) 175:8 JAMA Intern Med 1323 at 1324. For a case study showing positive effects on live undirected kidney donations, see Firat Bilgel & Brian Galle, "Financial incentives for kidney donation: A comparative case study using synthetic controls" (2015) 43 J Health Econ 103. Recent evidence also shows that economic incentives enhance other forms of prosocial activities, such as pro-environment behavior, as well as the attractiveness and quality of jobs with strong intrinsic and other-regarding motives, such as civil service, teaching, and health-related activities. For a survey of these results, see Nicola Lacetera, "Incentives for prosocial activities" (2016), online: IZA World of Labor <wol.iza.org/articles/incentives-for-prosocial-activities/long>.
19. Gary S Becker & Julio Jorge Elías, "Introducing Incentives in the Market for Live and Cadaveric Organ Donations" (2007) 21:3 J Econ Perspect 3 at 3, 14-15.

The opposition to these transactions rests in part on a desire to protect vulnerable people from exploitation or coercion.[20] However, the aversion goes beyond this desire to include concerns that explicit rewards for certain activities might corrupt the moral values that hold a society together.

In this article, I focus on the type and nature of moral opposition to payments for body parts. I will, in particular, offer insights from economics into the study of these ethical concerns and the question of how they can be balanced against the efficiency effects of providing incentives.

I. THE NATURE OF MORAL REPUGNANCE TOWARDS PAYMENT

Although the study of ethics goes back thousands of years, here I focus on a recent framework for understanding moral views about certain economic exchanges that Nobel Laureate economist Al Roth calls "repugnant transactions."[21] For Roth, transactions are repugnant if some individuals' aversion to them constrains other individuals from engaging in them, even if the other individuals would benefit from the trade.[22] Just as societies regulate or prohibit certain activities and trades because they produce economic inefficiencies (*e.g.*, negative externalities or informational asymmetries about the quality or safety of a good or service), they also limit or ban some transactions even in the absence of these inefficiencies when ethical concerns are present. These limits vary over time and place. For example, indentured servitude was once accepted in many countries but is now universally seen as unacceptable, and life insurance contracts were considered repugnant in the past but are now widely allowed. Activities such as same-sex marriage, surrogacy, prostitution, the supply of cadavers for research, and the consumption of certain types of food (*e.g.*, horse meat) are regulated differently in different countries—and sometimes even within the same country—largely because of moral considerations.

Many transactions that are viewed as morally repugnant involve the human body or parts of it as the "good" of the transaction (in the form of a sale or service provision), from a paid voluntary army to prostitution, from surrogacy to payments for human organs. Providing payments or other economic incentives to donors of blood and body parts is considered morally unacceptable by many blood-collecting organizations and health agencies. For instance, the World

20. John Lawrence Hill, "Exploitation" (1994) 79 Cornell L Rev 631 at 645.
21. Alvin E Roth, "Repugnance as a Constraint on Markets" (2007) 21:3 J Econ Perspect 37.
22. *Ibid* at 40.

Health Organization (WHO) only countenances "voluntary, non remunerated" donation of blood.[23] WHO advances similar if not stronger arguments with reference to the transplantation of human cells, tissues, and organs: Its guiding principles, again, exclude payments to donors.[24]

The opposition to any form of compensation for certain activities is typically motivated by more than one type of moral concern.

A first set of issues regards the risk of exploitation or coercion of individuals, a violation of the basic moral principle that individuals should provide free and informed consent to undertake a transaction, and especially so when a medical procedure is part of the trade.[25] The concern with providing compensation is that disadvantaged individuals may oversupply their blood or body parts in a way that can be harmful to their own health and that they may regret in the future. Second, payments may contravene a principle of fairness in the allocation

23. World Health Organization, "The Melbourne Declaration on 100% Voluntary Non-Remunerated Donation of Blood and Blood Components" (2009), online: <www.who.int/worldblooddonorday/MelbourneDeclarationWBDD09.pdf>.
24. World Health Organization, "World Health Assembly Resolution 57.18, Human organ and tissue transplantation" (May 2004), online: <www.who.int/gb/ebwha/pdf_files/WHA57/A57_R18-en.pdf>.
25. For moral principles around the trafficking of human organs, see Council of Europe, *Council of Europe Convention against Trafficking in Human Organs*, 25 March 2015, CETS 216. See also US Department of Health & Human Services, *Organ Transplantation: Issues and Recommendations: Report of the Task Force on Organ Transplantation* (US Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Office of Organ Transplantation, 1986) [US Dept of Health]. For a survey of the ethical and legal issues around human tissue use, see Nuffield Council on Bioethics, *Human Tissue: Ethical and Legal Issues* (London: Nuffield Council on Bioethics, 1995) at 130, para 13.24. For a broad overview of the commodification of body parts, see Margaret Jane Radin, *Contested Commodities* (Cambridge, MA: Harvard University Press, 1996). For a market-focused overview, see Debra Satz, *Why Some Things Should Not Be for Sale: The Moral Limits of Markets* (New York: Oxford University Press, 2010). Recent studies in economics investigated the potential undue influence effects of remunerations. See especially Sandro Ambuehl, "An Offer You Can't Refuse? Incentives Change How We Think" (University of Toronto, 2016), online: <https://ssrn.com/abstract=2830171>. See also Sandro Ambuehl, Muriel Niederle & Alvin E Roth, "More Money, More Problems? Can High Pay be Coercive and Repugnant?" (2015) 105:5 Am Econ Rev Papers & Proc 357.

of blood and organs because they would create disparity in access if access were based on the recipients' ability to pay.[26]

A third reason for moral opposition is that compensating blood and organ donors (but also, for example, surrogate mothers) would violate human dignity and would corrupt sacred or protected values. Allowing these activities may then create a moral slippery slope where further and even more questionable trades are allowed; societies would therefore be better off not running these risks.[27]

Finally, a sense of unease or disgust towards certain activities could represent a form of instinctive wisdom and, as such, be sufficient motive to prohibit certain activities even if the sources of disgust cannot be fully articulated. For example, Leon Kass, who served as Chairman of the President's Council on Bioethics from 2001 to 2005 in the United States, advanced this argument to support his argument against human cloning.[28]

Taken together, these concerns encompass a broad set of moral themes, including considerations about individual freedom, the safeguarding of society, and the sacred nature of the human body. My reading of the relevant literature is that, at least for the case of compensation for blood, plasma, and organs, the differences between these classes of moral concerns have not been fully spelled out. Absent a clear understanding of the peculiarities of each moral source of opposition, it is difficult to study whether and how the various concerns can be addressed and, in particular, what policy levers are appropriate.

On the one hand, issues related to coercion, exploitation, and fairness could, at least in part, be addressed by proper legal and institutional design. For example, rewards may have a coercive and exploitative nature because an individual could use compensation to fulfil some pressing needs without thoroughly thinking about the longer-term consequences. This may occur especially if the payment

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26. See generally US Dept of Health, *supra* note 25. For the principles of fairness in blood allocation, see Titmuss, *The Gift*, *supra* note 11 at 119. Fairness considerations may also be more complex than a mere concern that disadvantaged individuals may be coerced into supplying blood for compensation, or be unable to access blood due to its price. One might argue, for example, that (uncompensated) donors are the only participants to not receive any economic benefits in the supply chain, as other parties—such as collection agencies and medical providers—received payments or reimbursements for services and costs.
27. See *e.g.* Francis L Delmonico et al, "Ethical Incentives—Not Payment—for Organ Donation" (2002) 346:25 N Eng J Med 2002 at 2004 [Delmonico, "Ethical Incentives"]. See also Ruth W Grant, "Ethics and Incentives: A Political Approach" (2006) 100:1 Am Pol Sci Rev 29; For an overview of the moral limit of markets, see Michael J Sandel, *What Money Can't Buy: The Moral Limits of Markets* (New York: Farrar, Straus and Giroux, 2012).
28. Leon R Kass, "The Wisdom of Repugnance: Why We Should Ban the Cloning of Humans" (1997) 216: 22 New Repub 17 at 20 [Kass].

is in the form of cash, whereas in-kind items would be less likely to generate excessive pressure on potential donors because they are less easy to monetize. In-kind rewards and delayed compensation—such as contribution to a pension, investment, or college fund—are some of the proposals recently advanced to allay concerns about the excess temptation of direct cash and the ensuing problems of coercion and exploitation.[29] Regarding concerns for fairness, one policy solution would be to regulate payments and have a third party (*e.g.*, the government or an insurance company) pay for the rewards and allocate blood or organs based only on medical need and other transparent criteria that do not give an undue advantage to the rich. Note that even the most vocal advocates of payments for blood or body parts do not propose a pure market system, but rather the type of regulated payments that I just described.[30]

To the extent that institutional arrangements can mitigate coercion, exploitation, and unfairness, one could argue that these sources of moral opposition are also more amenable to trade-off thinking—that morality concerns can be weighed against the potential efficiency gains that payments may cause (*e.g.*, increases in supply). Therefore, societies may be open to accepting efficiency-enhancing procurement and allocation systems in exchange for the reduction of their moral repugnance. Where the nature of the moral opposition to payments resides in issues of coercion, exploitation, and unfairness, arrangements to reduce these risks should therefore allay this aversion.

On the other hand, preoccupations with human dignity, the corruption of social values, or even disgust resemble "sacred values," or principles that individuals and societies are not willing to compromise against any other form of potential gain.[31] In his original analysis, Titmuss expressed concerns about payments for blood donors in addition to his predictions about the negative effects of rewards on donor motivation and blood safety. Compensation would be exploitative, especially of individuals in lower socio-economic groups, but it would also more broadly affect the prevailing values in a society, reducing people's "sense of

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29. See *e.g.* Sally Satel, "A College Tuition Payment for Your Spare Kidney?" *Slate* (13 September 2016), online: <www.slate.com/articles/health_and_science/medical_examiner/2016/09/the_current_kidney_donation_system_is_failing_us.html>.
30. T Randolph Beard & Jim Leitzel, "Designing a Compensated-Kidney Donation System" (2014) 77 Law & Contemp Probs 253 at 253-54. See also Sally Satel & Benjamin Hippen, "A Way to Reward Organ Donors," *Forbes* (30 October 2008), online: <www.forbes.com/2008/10/29/organ-donors-kidneys-oped-cx_ss_bh_1030satelhippen.html>.
31. Philip E Tetlock et al., "The Psychology of the Unthinkable: Taboo Trade-Offs, Forbidden Base Rates, and Heretical Counterfactuals" (2000) 78:5 J Personality & Soc Psychology 853 at 853.

community."[32] As a consequence, a payment system for one prosocial activity can have negative moral consequences for society overall and as such, there is room to limit the individual freedom to offer and receive economic rewards. The WHO's aversion to paying for blood, tissues, or organs, mentioned above, is based on arguments that go beyond concerns for exploitation to encompass the risk of erosion of overall moral values in society.[33] In expressing their opposition to any form of payment for organ donors, Francis Delmonico and his co-authors are equally clear about the origins of their moral opposition. They state that payments are ethically unacceptable, "*despite the purported benefits of such a sale for both the buyer and the seller*. […] the fundamental truths of our society, of life and liberty, are values that should not have a monetary price."[34] The fundamental truths mentioned in this quote trump any consideration, in the words of the authors, of the benefits that parties may receive from a price-mediated organ transaction. Political philosopher Michael Sandel, in describing the different forms of moral concerns around allowing certain transactions to be price-mediated, clarifies that in most cases, solving issues related to coercion and fairness would only partially address the opposition:

> [L]iberal consent theorists […] think that the commodification and privatization of public life can be addressed simply by adjusting the background conditions within which markets operate. According to [them], there is nothing wrong with commodification that fair terms of social cooperation cannot cure; if only society were arranged so that people's choices to buy and sell things were truly voluntary, rather than tainted by unfair bargaining conditions, the objection to commodification would fall away. *What that argument misses are the dimensions of life that lie beyond consent, in the moral and civic goods that markets do not honor and money cannot buy*.[35]

Although the visceral disgust towards certain activities and transactions, considered by Kass as a form of wisdom,[36] may seem similar to concerns about human dignity and corruption of social values, these latter concerns appeal to principles that are shared in a population and not entirely subjective. By contrast,

32. Titmuss, *The Gift*, *supra* note 13 at 245. For an analysis of Titmuss' arguments, see David Archard, "Selling Yourself: Titmuss's Argument Against a Market in Blood" (2002) 6:1 Journal of Ethics at 87.
33. World Health Organization, "WHO Guiding Principles on Human Cell, Tissue and Organ Transplantation" (May 2010), online: WHO <www.who.int/transplantation/TxGP08-en.pdf> 1 at 5.
34. Delmonico, "Ethical Incentives," *supra* note 27 at 2004 [emphasis added].
35. Michael J Sandel, "What Money Shouldn't Buy" (2003) 5:2 Hedgehog Review 77 [emphasis added].
36. Kass, *supra* note 28 at 20.

an appeal to disgust makes it harder to distinguish a "deep wisdom" from, for example, fear and opposition to something that is new or different (*e.g.*, interracial or same sex marriage).[37] Those who experience moral disgust are generally unable to refer to specific and generally-accepted or shared principles. This inability is why disgust-based arguments have been extensively critiqued and why scholars, practitioners, and policymakers are generally reluctant to have disgust-based aversions inform public policy.[38]

These strong beliefs are unlikely to be amenable to compromises with any gains, or to change in the face of new information showing, for example, the potential positive supply effects of providing payments. Another peculiarity of "sacred value" concerns is that, by their nature, they are less well-defined than coercion, exploitation or unfairness, and as such, more likely to vary among countries and over time. This might contribute to explaining heterogeneities among countries in what morally controversial activities are allowed. For example, prostitution is illegal in the United States (with exceptions in Nevada) but not in Germany, whereas Germany (like many other European countries) bans commercial surrogacy but many US states allow it.[39] It is implausible that two societies like Germany and the United States have contrasting conceptions of what constitutes coercion, exploitation, or fairness in a transaction. Yet, deeper cultural differences might determine what is considered a sacred value and what is not. Another relevant example is the difference in legislation regarding the procurement of plasma in the United States and Canada. The United States allows payments to plasma donors and the establishment of for-profit plasma centers,

37. *Ibid*.
38. For an exploration of how shame and disgust can inform law and public policy, see Martha C Nussbaum, *Hiding from humanity: Disgust, Shame, and the Law* (New Jersey: Princeton University Press, 2004).
39. For prostitution laws in the United States, see ProCon, "US Federal and State Prostitution Laws and Related Punishments" (14 July 2016), online: <prostitution.procon.org/view.resource.php?resourceID=000119>. For prostitution laws in Germany, see Barbara Kavemann, "The Act Regulating the Legal Situation of Prostitutes—Implementation, Impact, Current Developments" (September 2007), online: <www.cahrv.uni-osnabrueck.de/reddot/BroschuereProstGenglisch.pdf>. For surrogacy laws in the United States, see Alex Finkelstein et al, "Surrogacy Law and Policy in the US: A National Conversation Informed by Global Lawmaking" *Report of the Columbia Law School Sexuality and Gender Law Clinic* (May 2016). For surrogacy laws in Germany, see David Quinn, "France and Germany ban surrogacy—so should we," *Independent* (8 November 2014), online: <www.independent.ie/opinion/columnists/david-quinn/france-and-germany-ban-surrogacy-so-should-we-30727878.html>.

whereas such payments are illegal in most of Canada.[40] Yet, Canada imports most of the plasma that it needs from the United States.[41] Finally, even within the same jurisdiction, seemingly similar actions in different trades concerning the human body receive different treatment; for example, some forms of consensual body harm, such as boxing and hockey, remain legal in Canada, whereas courts have ruled that practices such as BDSM between consenting adults should be sanctioned.[42] All of this suggests, again, that some deeper and less clearly-defined moral objections need to be considered.

A few studies show that certain beliefs can alter reactions to presented facts, even at the level of cognitive processing. Dan Kahan found evidence of "ideologically motivated cognition": The ability of individuals to solve certain mathematical problems, for example, is affected by whether the situation depicted in the problem represents a politically divisive issue (such as the effects of gun control policies).[43] In such situations, respondents are more likely to give answers that are more consistent with their political beliefs than with the data of the problem.[44] Brendan Nyhan and his team documented that the provision of information that refutes claims of a link between vaccines and autism link *reduced* the intent to vaccinate their children for parents with the least favorable vaccine attitudes.[45] Hanselmann and Tanner showed that thinking about "taboo"

40. For US laws on plasma donation, see US Food and Drug Administration, "CPG Sec. 230.150 Blood Donor Classification Statement, Paid or Volunteer Donor" (20 March 2015), online: <www.fda.gov/ICECI/ComplianceManuals/CompliancePolicyGuidanceManual/ucm122798.htm>. For Canadian laws on plasma donation, see Kelly Crowe, "Paid plasma in Canada: 10 things to know about the business of blood," *CBC News* (9 March 2016), online: <www.cbc.ca/news/health/paid-plasma-blood-donations-canada-1.3480763>.
41. Dr. Graham Sher, "Prohibiting pay-for-plasma would harm patients," *The Toronto Star* (13 March 2013), online: <www.thestar.com/opinion/commentary/2013/03/13/prohibiting_payforplasma_would_harm_patients.html>.
42. Nicola Luksic, "BDSM in Canada is 50 shades of legal grey," *CBC News* (26 February 2015), online: <www.cbc.ca/news/canada/bdsm-in-canada-is-50-shades-of-legal-grey-1.2969194>.
43. Dan M Kahan, "Ideology, Motivated Reasoning, and Cognitive Reflection" (2013) 8:4 Judgment & Decision-Making 407 at 409.
44. *Ibid*. See also Dan M Kahan et al, "Motivated Numeracy and Enlightened Self-Government" (Yale Law School, Public Law Working Paper No 307, 2016), online: <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2319992>.
45. Brendan Nyhan et al, "Effective Messages in Vaccine Promotion: a Randomized Trial" (2014) 133:4 Pediatrics e835.

and "tragic" tradeoffs is more psychologically stressful than thinking about standard tradeoffs.[46]

Other studies found that individuals may be open to considering counterfactuals and cost-benefit considerations in relation to sacred or protected values under certain circumstances. Jonathan Baron and Sarah Leshner found that people differ in their assessment of what constitutes a protected value; moreover, even when individuals classified an activity or transaction as implicating a sacred value (*e.g.*, guaranteeing free speech, no matter the content), they could often come up with counter-examples (*e.g.*, freedom of speech can be limited in extreme cases such as Nazi propaganda).[47] Philip Tetlock and his coauthors contend that although people are reluctant to make certain tradeoffs, they often end up making them.[48] They may recast a sacred value as not sacred, or conversely, they might modify the status of a given principle to protected rather than negotiable.[49] In the case of the supply of body parts, for example, the level and safety of the supply of blood or organs may be the main criteria to assess the moral acceptability of a procurement and allocation system. If economic rewards increased the safe supply of blood and organs, thereby saving more lives and improving health outcomes for more people, then some people might consider it ethical to adopt, rather than prohibit, compensation.

These studies suggest that there may be room to balance moral beliefs with other welfare-relevant factors such as economic efficiency. However, the heterogeneity among individuals and activities regarding the perception of protected values and how amenable they are to tradeoffs indicates that these

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46. Martin Hanselmann & Carmen Tanner, "Taboos and conflicts in decision making: Sacred values, decision difficulty, and emotions" (2008) 3:1 Judgment & Decision Making 51. For a review of the earlier psychology literature on this subject, see Ziva Kunda, "The Case for Motivated Reasoning" (1990) 108:3 Psychological Bulletin 480. Recent economic models also allow for the presence of "motivated beliefs," or beliefs that "fulfill important psychological and functional needs of the individual," such as "moral self-esteem, hope and anxiety reduction, social identity," etc. See Roland Bénabou & Jean Tirole, "Mindful Economics: The Production, Consumption, and Value of Beliefs" (2016) 30:3 J Econ Pers 141 at 141. See also Roland Bénabou, "The Economics of Motivated Beliefs" (2015) 125:5 Revue d'Economie Politique 665.
47. Jonathan Baron & Sarah Leshner, "How Serious are Expressions of Protected Values?" (2000) 6:3 Journal of Experimental Psychology 183 at 185.
48. Alan Page Fiske & Philip E Tetlock, "Taboo Trade-offs: Reactions to Transactions That Transgress the Spheres of Justice" (1997) 18:2 Political Psychology 255.
49. *Ibid*. See also Philip E Tetlock, "Thinking the Unthinkable: Sacred Values and Taboo Cognitions" (2003) 7:7 Trends in Cognitive Sciences 320 at 321.

compromises are complex, based on ill-defined concepts, and as such, likely to produce different outcomes for different activities and contexts.

In Part II, I discuss some recent work that my co-authors and I have done to address these questions in the case of payments for organ donations.

II. JUST HOW STRONG IS THE MORAL OPPOSITION TO PAYMENT?

In the last couple of years, Julio Elias, Mario Macis, and I set out to elaborate a conceptual and empirical framework to assess whether individuals' moral concerns about providing compensation to organ donors are similar to sacred values or, instead, whether people are open to considering payments if those payments enhance the supply of organs. Our interest was not just in how individuals perceive the morality of a given transaction and its organization, which has been the main topic of much of the existing related research; rather, we focused on opinions about whether society (regardless of the ethical stances of single individuals) should allow and regulate certain transactions.

Knowledge of whether the members of a society consider the efficiency effects of a morally controversial transaction or, in contrast, are not willing to compromise their moral positions with any other aspect of a trade, together with more precise evidence on the nature of their moral concerns, can inform the policies a country may consider to alleviate the shortage of organs in ways that are acceptable by their population.

Addressing these questions is challenging, however. First, some of the policy options of interest, like creating a market for kidneys, are not available; thus, we have no direct information on whether different procurement and allocation systems for organs would enhance supply or by how much. Second, moral beliefs are hard to quantify let alone compare among individuals. Research on the nature of ethical beliefs and tradeoffs between moral repugnance and efficiency of different organ procurement and allocation systems cannot rely on actual choices and objective metrics, but only on hypothetical scenarios and subjective measures. While this might affect our ability to provide clear policy implications, we should realize that the alternative option is to not address these questions at all. Although there are limitations in relying on hypotheticals or stated preferences as opposed to actual behaviors and revealed preferences, there are many important areas of research where observing actual behavior is not possible and yet hypothetical studies based on subjective measures can provide useful information. Examples include the analysis of subjective well-being and

the relationship between happiness and choice, of individual preferences for a more or less redistributive tax system, and of time and risk preferences.[50]

In a first set of studies, we asked whether individuals would change their support for payments to organ donors if information was available to them about different procurement and allocation systems for organs, including payments for donors.[51] We surveyed 3,417 participants recruited through Amazon Mechanical Turk (mTurk), an Amazon Web Services platform that facilitates recruitment of large numbers of individuals to perform tasks online, such as surveys and experiments.[52] A random subsample on this platform received our information treatment: a short text that described the current organ shortage in the United States and its social and economic consequences. The text then reported different strategies that have been proposed (and tried in some cases) to alleviate the shortage, including kidney exchanges, changing the default rule for cadaveric organ donation, and providing regulated payments to donors or their families. The text provided references to academic studies that evaluated these proposals. In particular, it offered current estimates of the positive impact of compensation on supply. The study also included a control group that did not receive any text to read, and a "placebo" group that received a text unrelated to the organ shortage—this text was of similar length and structure as the one for the treatment group, and was also health-related, discussing causes and symptoms of the flu and potential remedies. We then elicited the opinions of the respondents about allowing regulated payments for organ donors or their families.

To preserve the privacy and anonymity of the responses and to limit social desirability bias, we gauged these opinions using the Item Count Technique

50. For time and risk preferences, see James Andreoni & Charles Sprenger, "Risk Preferences Are Not Time Preferences" (2012) 102:7 Am Econ Rev 3357. For the relationship between trauma and economic risk preferences, see Michael Callen et al, "Violence and Risk Preference: Experimental Evidence from Afghanistan" (2014) 104:1 Am Econ Rev 123. For well-being and the relationship between happiness and choice, see Daniel J Benjamin et al, "Beyond Happiness and Satisfaction: Toward Well-Being Indices Based on Stated Preference" (2014) 104:9 Am Econ Rev 2698. For tax system preferences, see Ilyana Kuziemko et al, "How Elastic Are Preferences for Redistribution? Evidence from Randomized Survey Experiments" (2015) 105:4 Am Econ Rev 1478.

51. Julio J Elias, Nicola Lacetera & Mario Macis, "Sacred Values? The Effect of Information on Attitudes Toward Payments for Human Organs" (2015) 105:5 Am Econ Rev 361; Julio J Elias, Nicola Lacetera & Mario Macis, "Markets and Morals: An Experimental Survey Study" (2015) 10:6 PloS One e0127069.

52. Michael Buhrmester,Tracy Kwang & Samuel D Gosling, "Amazon's Mechanical Turk: A New Source of inexpensive, Yet High-Quality, Data?" (2011) 6:1 Perspectives on Psychological Science 3. See also Winter Mason & Siddharth Suri, "Conducting behavioral research on Amazon's Mechanical Turk" (2012) 44:1 Behavioral Research Methods 1.

(ICT)—instead of asking directly if an individual would favor regulated payments, we gave one subgroup within each treatment condition a list of four neutral statements (*i.e.*, non-sensitive and unrelated to the research topic). The other subgroup received the same four sentences plus a fifth one that expressed favour towards payments for organs. The subjects reported the number of statements that applied to them. Thus, whether a person answered positively or negatively to a specific item could not be determined. However, with a large enough sample, the difference in the average number of indicated statements between those with five and those with four sentences provides an estimate of the share of subjects supporting the activity of interest. For example, suppose that, among subjects in the treatment groups, those receiving five sentences reported on average that 3.1 applied to them, and those who received four sentences reported an average of 2.5. Then we could infer that 3.1-2.5 = 0.6, or 60 per cent of subjects in the treatment (information) group were in agreement with establishing payments for organs. If, in the control (or placebo) group, the difference in average statements that applied to the subjects was 0.45, then we would calculate the treatment effect (the impact of receiving specific information on the organ shortage and potential remedies) to be an increase of individuals in favor of payments by 15 percentage points.

We found that providing information on studies that predict an increase in the supply of organs if payments were allowed (the information treatment) led to an increase in support for these payments from 50 per cent (nearly identical for both the control and placebo groups) to about 70 per cent of the surveyed subjects. Additional experiments on separate subject samples showed that individuals were responsive to information that was specific to organ donations; there was no effect on approval rates for payments to organ donors when we provided information on the benefits of a market system for other morally controversial activities (such as prostitution). Interestingly, we did not find evidence of heterogeneity in response to specific information based on, for example, respondents' gender, education, or religious beliefs.

In contrast, supplementary evidence on the support for two other morally repugnant activities (slavery and prostitution) showed that the role of information and cost-benefit considerations in changing attitudes was heterogeneous according to gender, religiosity, and political orientation. In particular, information about the potential benefits of legalizing prostitution (the reduction of sexually transmitted diseases and violence against sex workers) *reduced* support for legalization among women. In addition, providing this information resulted in women reducing their support for payments to organ donors, in contrast with an increase in

support when women received direct information about the potential increase in organ supply from paying organ donors. Therefore, there was a "spillover" effect of information on a morally controversial transaction to another in a case where the two activities were somewhat related to the trade of the human body or body parts. It is difficult to identify a specific mechanism for this spillover effect. The fact that it originated in womens' responses, and the existence of a strong aversion amongst women towards a market for sex (plausibly associated with stigmatization, dominance, and women's oppression)[53] may explain how making such an activity salient and even focusing on the benefits of its legalization can generate strong, visceral opposition for other body-related transactions if they occur at a monetary price.

The findings from these studies imply that the provision of well-supported information can change attitudes towards the acceptance of morally-charged market trades, but this information has to be context-specific and the effects are, in turn, specific to a particular transaction and not generalizable. We therefore need a case-by-case approach to understand the acceptance of market-based solutions for morally controversial transactions.

Although these studies provide evidence, at least in the case of payments for organs, that information might change opinions about whether payments should be considered in a society, they were not designed to quantify the tradeoffs that people might make between an increase in the supply of organs resulting from payments on the one hand, and their moral opposition to these payments on the other. Moreover, we could not investigate heterogeneity in these tradeoffs in a more systematic way that would allow us to distinguish between different "types" in a population—in particular, between individuals with more consequentialist views, who would therefore be more open to compromising between efficiency and morality, and deontological individuals who would give priority to moral

53. For an exploration of the policy debates around prostitution, see Joyce Outshoorn, "Introduction: Prostitution, Women's Movements and Democratic Politics," in Joyce Outshoorn, ed, *The Politics of Prostitution: Women's Movements, Democratic States and the Globalization of Sex Commerce* (Cambridge, UK: Cambridge University Press, 2004) 1. For an exploration of how feminist philosophers have analyzed prostitution, see Laurie Shrage, "Feminist Perspectives on Sex Markets" (18 February 2004), online: Stanford Encyclopedia of Philosophy <plato.stanford.edu/entries/feminist-sex-markets>.

beliefs over efficiency considerations.[54] Finally, the findings from these studies could not inform us about what types of moral concerns, among those described above, were important to people.

These are the questions that we are addressing in our ongoing research.[55] We are relying, again, on a survey instrument that we submitted to 2,918 US-based respondents on mTurk. This survey allows us to test whether the moral aversion to providing payments to organ donors (we focus on live kidney donations) is a "sacred value," or whether individuals balance moral preferences with the potential efficiency gains from allowing a price-mediated trade of kidneys. Subjects in this experiment rated their moral views of three different kidney procurement and allocation systems: a system based on unpaid donors with priority-based allocation (the current system); a system where donors would receive $20,000 from a public agency, with allocation based on the same priority algorithm; and a system of individual, private transactions, where again donors would receive $20,000 and the organ recipient would pay (out of pocket or through privately purchased insurance). The questions on the morality or, conversely, repugnance of each system were in the form of numerical ratings of how coercive, unfair, exploitative, and against human dignity each system was according to the participant, and an overall assessment of how much a system contrasted with the respondent's values. We then asked the subjects to assume that each system would produce a certain number of kidneys; these numbers were randomly determined from a distribution for each individual. Finally, respondents selected the system that they thought was the most appropriate for a society to adopt.

In addition to letting us assess whether people would choose a more efficient system (*i.e.*, one for which the hypothesized supply of kidney was higher) even if considered less morally acceptable, this choice experiment also provides information on the heterogeneity in preferences and on the nature of the moral opposition to payments for kidneys.

Our current estimates indicate that the median respondent would favor payments to organ donors made by a public agency if it increased the annual

54. As mentioned in Part I, earlier work indicates that people might also hold "utilitarian" preferences such that they may consider a system as less repugnant (or more morally acceptable) precisely because it enhances the supply of organs. In particular, if economic rewards increased the safe supply of kidneys, then these individuals might consider it ethical to adopt, rather than prohibit, incentives. In our study, however, we found that opinions about how moral an organ procurement and allocation system is do not depend on the hypothesized supply level that the system would produce.

55. See *e.g.* Julio J Elias, Nicola Lacetera & Mario Macis, "Efficiency-Morality Trade-Offs in Repugnant Transactions: A Choice Experiment" (2016) NBER Working Paper No 22632.

supply of kidneys by about six percentage points, whereas a twenty percentage point increase would be required to accept a system based on private transactions. Thus, a majority of individuals would be willing to accept a more repugnant system provided that it produced a sufficiently large additional number of transplants. Note that the size of the estimated trade-off does not depend just on the presence of a monetary payment, but varies depending on whether the exchanges occurred through private transactions or whether a third party provided payment to donors and allocated organs to recipients. In particular, a system whereby a public agency pays donors and the allocation of organs follows priority rules required relatively small efficiency gains (a reduction of about 10 per cent of the annual shortage) to receive the support of a majority, whereas individual transactions between organ donors and recipients required larger supply increases (a 56 per cent reduction of the shortage). The analysis of the ratings for the various types of morality concerns showed that private transactions were considered highly unfair to the recipients, whereas a system with public agency payments and organ allocation reduced fairness concerns to a level similar to that of unpaid donations, arguably because this system was perceived to guarantee equal access to organs for all patients in need. Thus, fairness to the recipients is an important factor affecting moral repugnance towards a paid-donor system.

Our data also showed heterogeneity in the willingness to trade off morality and efficiency, ranging from consequentialist respondents to deontological ones who required very high increases in efficiency to accept payment systems that they consider more morally repugnant or did not accept such systems at all. Interestingly, there was no strong relation between this heterogeneity and various socio-economic characteristics that we collected in the survey; conversely, the differences in estimated tradeoffs did relate to the overall ethical stances of the participants (again gauged through some questions in the survey). Thus, the dissenting positions on whether to allow and how to regulate a morally controversial transaction—such as the procurement and allocations of kidneys for transplantation—appear to reside in deeply held beliefs that go beyond demographics, religion, or political preferences, and thus need to be measured separately.

III. CONCLUDING THOUGHTS

Let me summarize the main insights from this article, and in doing so, indicate directions for future research and implications for policy and regulation.

First, the existing evidence suggests that properly designed incentives for the supply of body parts such as blood and plasma increase supply without negative consequences for the quality of the collected material. These effects plausibly extend to the supply of bone marrow and organs, as some initial evidence and theoretical analyses indicate.

Second, this behavioral effect alone does not necessarily justify advocating for the introduction of payments for supplying body parts. These activities concern contested commodities or repugnant transactions and societies may want to prevent certain transactions, even if they increased supply, because of ethical concerns such as exploitation, fairness, and the degrading of human values.

Third, and as a consequence of the previous two points, when trades concern contested commodities, societies often face tradeoffs between the efficiency-enhancing effects of transactions mediated by a monetary price and the moral opposition to the provision of these payments for certain trades. Both the efficiency effects and the ethical concerns are relevant for welfare, and as such, societies should pay attention to both.

Fourth, in order to fully consider efficiency effects and moral issues around the organization of a contested transaction, we need to know what the efficiency effects are, what moral beliefs a population holds, and whether and how people make tradeoffs between their preferences for efficiency and for consistency with their ethical positions. Although we now have information on the supply effects of incentives for activities such as blood and plasma donations, comparable evidence for other body parts such as bone marrow and organs is very limited because of data constraints and more importantly because of legal prohibitions. Similarly, we know little about the nature of the moral concerns about establishing payments for these transactions. As a consequence, evidence of whether and how people trade off ethical beliefs and cost-benefit considerations in the context of repugnant transactions has been missing.

In recent studies focused on payments for organ donors (live kidney donors in particular), we found that US respondents increased their support for payments when provided specific information about the potential positive supply effects of monetary compensation. We also found that the majority of individuals would be willing to accept a more repugnant system provided that it produced a sufficiently large (but realistic) additional number of transplants. The opposition to payments, moreover, is much stronger if payments come from private transactions than when the payer is a third party—this is consistent with the importance of fairness concerns in determining ethical beliefs regarding compensation for the supply of organs.

Research like ours—and we hope there will be more to come from other researchers—can inform policymakers about what options are morally viable to address the shortage of organs and tissues for transplant. Moreover, trial studies assessing the effects of paid donations could significantly enhance the ability of a population to determine what the preferred organ procurement and allocation system should be. For example, the US Court of Appeals for the Ninth Circuit recently ruled that compensating individuals who donate bone marrow through a particular process known as apheresis is legal.[56] This ruling will enhance the ability of the residents of the Ninth Circuit to decide whether extending these types of compensation is acceptable. Similar considerations hold with regard to other transactions where ethical beliefs and efficiency considerations may collide. Research strategies that enable assessment of the nature and extent of morality-efficiency tradeoffs, together with the possibility to conduct studies about the effects of certain ways to organize a trade, should also be explored in other relevant areas. For example, this approach may help us understand whether the welfare benefits from legalizing indoor prostitution (such as the reduction of violence and incidence of STDs) can compensate for the moral opposition to regulating markets for sex. Other transactions to analyze within our framework include commercial surrogacy and the donation of human eggs.

An implication for academic work in this area is the importance of combining the theoretical and methodological approaches of different disciplines such as philosophy, bioethics, psychology, sociology, law, and economics. Each discipline can offer material to enhance our understanding of this complex theme, thus providing more founded insights for policy.

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56. *Flynn v Holder*, 684 F 3d 852 (9th Cir 2012). But see The Department of Health and Human Services, "Change to the Definition of "Human Organ" Under Section 301 of the National Organ Transplant Act of 1984" (2 October 2013), online: <www.federalregister.gov/documents/2013/10/02/2013-24094/change-to-the-definition-of-human-organ-under-section-301-of-the-national-organ-transplant-act-of>. There, the Deparment of Health and Human Services issued a Notice of Proposed Rulemaking in 2013 that would append "bone marrow" with "and other hematopoietic stem/progenitor cells without regard to the method of their collection." This would essentially reverse the decision in *Flynn v Holder*, which is instead based on the idea that the extraction of bone marrow by apheresis is very similar to the procedures to extract blood platelets or plasma, for which people can receive compensation.