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Organ Donations: Why the Gift of Life Ideology Is Losing Lives

By Dylan Fukai

ABSTRACT

As people around the world continue to die on organ transplant waiting lists, the international community sits idly by, hoping that human kindness will solve the growing need for organs. Current altruistic systems have proven to be inadequate to close the gap between the high demand for organs and the limited supply of legally available organs. The international community's aversion toward legal organ sales and the current issues stemming from the illegal organ market continue to impede progress toward saving lives. However, some nations have begun to transition from strictly altruistic organ transplantation systems. One example of a non-altruistic organ system is found in Iran, which has eliminated the nation's kidney transplant waiting list by creating a government regulated commercial organ market. The United States, which is being ravaged by a nationwide organ shortage, may feasibly be the next country to end its prohibition against compensating organ providers. As the number of deaths due to lack of available organs continues to increase annually around the world, changes are essential and inevitable. Organ donations should be seen as more than gifts of human kindness. By barring compensation for organ providers, the international community violates the autonomy of willing donors and sentences thousands of patients to death.

I. INTRODUCTION TO THE GLOBAL ORGAN SHORTAGE

The World Health Organization (WHO) strongly supports altruistic systems for organ donations, and nearly all nations have adopted laws prohibiting the sale of organs.¹ The current system of organ transplantation

^{1.} World Health Organization [WHO], *WHO Guiding Principles on Human Cell, Tissue and Organ Transplantation*, at 5, Res. WHA63.22 (2010), http://www.who.int/transplantation/Guiding_PrinciplesTransplantation_WHA63.22en.pdf.

implemented by most nations is confined to the use of cadavers and altruistic donations from live donors. Voluntary donations are available for patients lucky enough to survive the wait for anonymous donors, or for patients who have families or close friends willing to risk undergoing surgery. Living donations are selfless acts of compassion, and in a perfect world, such altruistic deeds would be sufficient to meet the global demand for organ transplantations. Unfortunately, the number of living donors does not come close to meeting the current demand for organs, and strict adherence to altruistic based policies has led to a severe organ deficit around the world.

The demand for organs far outpaces the supply available for transplantation. Of the 34,769 organ transplantations performed in the United States in 2017, less than eighteen percent came from living donors.² Most organ transplants involve organs taken from the dead. Over ninety percent of transplants performed in China and the European Union stem from cadavers.³ Most patients cannot acquire an organ transplant through a living donor and must wait for one to become available. Patients waiting for an organ transplant are stuck in the morbid position of hoping others die so they may use their organs or praying that others in the same dire position on the waiting list die before them, putting them one person closer to receiving life-saving treatment.

Proposals for legal organ markets have historically been rejected due to ethical concerns and fear of potential exploitation. Altruistic transplant systems hold that organ donations should remain gifts and not involve financial compensation. ⁴ The global prohibition on financially compensating organ donors overlooks the most important fact: people are dying despite the ability to save them. Altruistic donations alone are not sufficient to meet the growing demand, and the international community needs to consider commercial solutions to solve the organ crisis. Patients should have access to organs they desperately need, and potential organ providers should have the option to seek compensation for their organs.

^{2.} Organ Procurement & Transplantation Network, HEALTH RES. AND SERV. ADMIN., https://optn.transplant.hrsa.gov/data/view-data-reports/national-data/# (last visited Mar. 20, 2018).

^{3.} Alex H. Jingwei et al., Living Organ Transplantation Policy Transition in Asia: Towards Adaptive Policy Changes, 3 GLOB. HEALTH GOVERNANCE 1 (June 2010).

^{4.} Steve P. Calandrillo, Cash for Kidneys? Utilizing Incentives to End America's Organ Shortage, 13 GEO. MASON L. REV. 69, 99 (2004).

A. The Organ Crisis by the Numbers

Medical advancements in the past few decades have caused a rise in the number of organ transplants performed globally each year. In 2015, over 126,000 transplants occurred worldwide, a 5.8 percent increase from the previous year.⁵ However, despite the growth in transplants, the number of patients who need an organ transplant continues to escalate at a faster rate. A recent report by the European Parliament's Subcommittee on Human Rights estimated that only fifteen percent of patients on transplant waiting lists around the world receive the operation they need.⁶ Other reports paint an even bleaker picture. The Global Observatory on Donation and Transplantation, an organization created through the joint efforts of the WHO, the Spanish Transplant Organization, the Council of Europe, and others, estimated that less than ten percent of the global need for organ transplants was met in 2015.⁷

In the United States alone, over 115,000 people are currently on the national organ transplant waiting list.⁸ Even though ninety-two transplant surgeries are performed in the United States every day, deaths continue to climb as one patient is added to the national waiting list every ten minutes.⁹ In 2017, 5,823 patients died while waiting for an organ to become available.¹⁰ In addition to the patient deaths, 6,770 patients were removed from the waiting list because they became too sick to qualify for a transplant.¹¹ These fatalities are not unique to the United States. In 2013, the European Union, including patients in Turkey, Iceland, and Norway, had an organ waiting list of around 86,000 people, and in the same year, around 6,000 people died waiting for an organ.¹² The organ situation seems bleakest in Asia, where cultural and educational obstacles have resulted in

^{5.} Organ Donation and Transplantation Activities 2015, GLOB. OBSERVATORY ON DONATION & TRANSPLANTATION (2018), http://www.transplant-observatory.org/download/2015-activity-data/.

^{6.} European Parliament, Directorate-General for External Policies, *Trafficking In Human Organs* 16 (2015), http://www.europarl.europa.eu/RegData/etudes/STUD/2015/549 055/EXPO_STU%282015%29549055_EN.pdf.

^{7.} Organ Donation and Transplantation Activities 2015, supra note 5.

^{8.} Organ Procurement & Transplantation Network, supra note 2 (last visited Mar. 20, 2018).

^{9.} *Id*.

^{10.} Id.

^{11.} Id.

^{12.} Journalist Workshop on Organ Donations and Transplantation: Recent Facts & Figures, European Commission (Nov. 26, 2014), https://ec.europa.eu/health/sites/health/files/blood_tissues_organs/docs/ev_20141126_factsfigures_en.pdf.

significantly fewer organ donations than Western countries.¹³ In China there were an estimated 1.5 million patients listed on the national organ registry in 2007, and in Taiwan, with nearly 6,500 patients on the transplant list, there were only 100 organ donations in 2008.¹⁴ Time is a luxury for those suffering from organ failure, and holding on to exclusively altruistic organ policies will cause the number of fatalities to continue to increase.

B. Current Policies Against the Sale of Organs

Due to a variety of factors — history, culture, political ideologies, demographics, and geography — the international community rarely agrees on a uniform policy or practice. Organ sales are the exception — they are banned in all countries but one: Iran. Iran is the only nation in the world that allows organs to be bought and sold in a regulated commercial market. Although other countries, like Saudi Arabia, Australia, and Singapore have government reimbursement programs to help compensate living donors for medical expenses and lost wages, commercial organ transactions are prohibited. ¹⁶

The rest of the world has created and adopted individual national policies that prohibit the commercialization of human organs and ban any form of monetary compensation to organ providers. The WHO has been adamant about banning the sale of organs, and published the "Guiding Principles on Human Cell, Tissue and Organ Transplantation" in 1991. These principles were created to provide nations with "an orderly, ethical and acceptable framework for the acquisition and transplantation of human cells, tissues and organs for therapeutic purposes." In response to the shortage of legally available organs, the WHO revised their guiding principles on organ transplantation in 2010, but its stance against financial incentives remained unchanged. The WHO declared, "[c]ells, tissues and

^{13.} Jingwei, supra note 3, at 4.

^{14.} *Id.* at 4, 7.

^{15.} Ahad J. Ghods & Shekoufeh Savaj, *Iranian Model of Paid and Regulated Living-Unrelated Kidney Donation*, 1 CLIN. J. Am. Soc. NEPHROL 1136, 1137 (2006).

^{16.} Jia L. Chong, *Policy Options for Increasing the Supply of Transplantable Kidneys in Singapore*, 57 Sing. Med. J. 530, 531 (2016); Paul Garwood, *Dilemma Over Live-Donor Transplantation*, 85 Bulletin of the World Health Org. 1 (2007).

^{17.} WHO, supra note 1.

^{18.} *Id.* at 1.

^{19.} Id.

organs should only be donated freely, without any monetary payment or other reward of monetary value."²⁰

Laws banning and criminalizing the sale of organs began to develop once organ transplantation became a safer medical procedure in the late 1980s.²¹ For many years, live kidney donations were only allowed to come from donors who were genetically related to the donee.²² In the last thirty years, statutes have adapted to the growing need for organ transplants by expanding the pool of potential donors to encompass spouses, friends, acquaintances, and even anonymous donors.²³ Unfortunately, increasing the pool of potential donors has not solved the problem because far more organs are still needed.

The rising death toll and increasing need for more available organs is causing people to reconsider the effectiveness of a purely altruistic organ transplant system. Even the WHO acknowledges the shortcomings of the current system. The WHO's revised Guiding Principles report admitted, "[c]ontinuous improvements in medical technology... have led to an increase in the demand for organs and tissues, which has always exceeded supply despite substantial expansion in deceased organ donations as well as greater reliance on donation from living persons in recent years."²⁴ Despite the mounting data, the issue of whether to provide organ donors with financial incentives is still hotly contested.

II. The Debate Surrounding Altruistic Organ Transplantations

There are two primary arguments for maintaining an exclusive altruistic organ donation system, and both stem from the belief that allowing for-profit organ donations means treating the human body as a commodity. The ethical argument is straightforward: the sale of human body parts is barbaric and has no place in civilized society. The second argument against organ sales is more complex, revolving around the belief that legalizing financial compensation for organ providers will lead to the exploitation of the most marginalized and poorest people in the world. The concern is that poor

^{20.} Id. at 5.

^{21.} United Nations Office on Drugs And Crime (UNODC), Trafficking in Persons for the Purpose of Organ Removal 7 (2015), http://www.unodc.org/documents/human-trafficking/2015/UNODC_Assessment_Toolkit_TIP_for_the_Purpose_of_Organ_Removal.pdf.

^{22.} Id. at 8.

^{23.} *Id*.

^{24.} WHO, supra note 1, at 1.

people, desperate to escape crippling poverty, would be taken advantage of by wealthy buyers.

The arguments against a legal organ market fail to acknowledge the gravity of the current organ shortage. The ethical questions are based on social norms, not reason. The fear of increasing organ trafficking and other criminal activity involving the sale of organs is shortsighted. The current illegal organ market is already causing an influx of transplantation crimes, and only shifts in policy, and strict regulation, can help alleviate the abuses of the black market.

A. The Ethical Argument for Altruism

The ethical argument against compensating organ providers is rooted in ideology, not in a reasoned argument. People are naturally repulsed by the thought of someone selling their body, so their flesh can be used by another, and it is easy to lump the sale of organs in with other cultural taboos like necrophilia, cannibalism, and the defiling of corpses.²⁵ The economic and societal value of legitimizing an organ market is overshadowed by society's revulsion toward the act of paying for an organ, and falls outside the acceptable scope of commerce. Even Margret Thatcher, the former prime minister of the United Kingdom and a firm believer and advocate for the free market, said "the sale of kidneys or any organs of the body is utterly repugnant."²⁶

Leon Kass, an oft-published and outspoken American scientist, described this connection with the human body as "psychophysical unity," which "regards a human being as largely, if not wholly, self-identical with his enlivened body." The human body is what makes someone a human being; the identity of being "human" is tied to the body. From this perspective, Kass theorized that "organ transplantation . . . is — once we strip away the trappings of the sterile operating rooms and their astonishing technologies — simply a noble form of cannibalism." Under this ideology, organ transactions are seen as desecrating the human body, and an attack on what makes us human.

The stigma surrounding the commercialization of the human body paints the sale of one's organs as nothing more than a dressed-up act of

^{25.} Leon R. Kass, Life, Liberty, and the Defense of Dignity: The Challenge for Bioethics 183 (2002).

^{26.} Michael Kinsley, Take My Kidney, Please, TIME, Mar. 13, 1989, at 88.

^{27.} Kass, *supra* note 25, at 81-82, 185.

^{28.} Id. at 185.

savagery, but only if money or incentives are involved. Kass recognized the major inconsistency in the philosophical issue with organ commodification: Everyone is allowed to profit from an organ donation except the donor. Kass posed the question: "Why... should everyone be making money from this business except the person whose organ makes it possible?" Kass hypothesized that there must be an innate "uneasiness" with organ transplantation, or else, "what would be objectionable about its turning a profit?"³¹

There is a moral inconsistency involved in organ transplantation. The act itself is not outlawed until compensation is involved. Prostitution, another act that changes in moral character once money is introduced, is not banned or prohibited to the same degree as organ selling and is legal in many places. Yet, prostitution does not lead to lifesaving results like the sale of organs does. Furthermore, taking organs from cadavers is engrained in current organ transplant policies, and it is supported by the WHO.³² But harvesting organs from the dead could be condemned as defiling corpses while the bodies are still warm.

Current international systems see organ donations from volunteers as acts of kindness, and not only applaud and admire this generosity, but, in some situations, expect it. A father who refuses to give a kidney to his dying son, for no reason other than he chooses not to, would be viewed with scorn based on social norms. Yet, a father who would sell his kidney in exchange for enough money to provide for his family is not only barred by law from doing so, but is also subject to social disdain, just like the uncaring father mentioned earlier. Providing an organ is considered illegal and immoral when the exchange is made for money or other incentives, but why is it repulsive when the one who is giving up the most is compensated for their loss?

History has taught us that societal values change, and what is considered unethical is not set in stone. For example, life insurance was thought to be immoral until the mid-19th century.³³ Princeton professor and renowned sociologist, Viviana Zelizer, once called the practice "a profanation," because it "transformed the sacred event of death into a vulgar commodity." ³⁴ When viewed through a darker lens, life insurance is essentially a gamble that the insured will die prematurely, with a huge cash

^{29.} Id. at 177.

^{30.} *Id*.

^{31.} *Id*.

^{32.} WHO, supra note 1, at 2.

^{33.} Stephen J. Dubner & Steven D. Levitt, Flesh Trade, N.Y. TIMES, July 9, 2006.

^{34.} *Id*.

payout if one guesses right.³⁵ However, the ethical scale shifts in both directions, as actions once deemed moral can become repulsive over time. Slavery is the best example of this shift — once an accepted practice, now prohibited worldwide.

Not all countries share the same moral values. Dog eating is accepted in some nations yet would cause riots in the United States. Unmarried sexual activity is acceptable in some places, but harshly penalized in more traditional or religious-based communities. Ultimately, morality arguments are weak due to their subjective nature. People develop their standards of morality based on social, cultural, political, and scientific knowledge. Because of medical advancements in organ transplantation, the once unobtainable goal of increasing the volume of transplants is now well within the medical fields reach.³⁶ It is time for the morality argument for purely altruistic organ donation systems to be re-evaluated.

B. Organ Trafficking and the Black Market

The strongest justification for prohibiting the sale of organs stems from the belief that legalization will enable rich people, or nations, to exploit the poor. The argument is that financial incentives will put vulnerable demographics at the mercy of those ready to prey on their desperation. However, exploitation of marginalized communities is already occurring in the illegal organ market. An international black market does exist, and it resides in the shady underbelly of our global society. Implementing transplantation systems that would legally compensate organ providers would reduce the need for the existing black market.

"Trafficking in organs" is the general term used to describe "illicit activities that aim to commercialize human organs and tissues that are needed for therapeutic transplantation." Illegal organ trafficking can take many forms: trafficking in human beings for organ removal, organ tourism (or transplant tourism), or outright trafficking in organs, tissues and cells. The illegal organ market is big business, with illegal transplantations being performed in around 100 countries. The WHO reported that between five to ten percent of organ transplants worldwide were performed illegally in

^{35.} *Id*.

^{36.} Dubner, supra note 33.

^{37.} European Parliament, supra note 6, at 16.

^{38.} Id. at 16-18.

^{39.} UNODC, supra note 21, at 7.

 $2007.^{40}$ In 2011 alone, the illegal organ trade generated anywhere from 600 million to 1.2 billion U.S. dollars.⁴¹

Illegal organ trafficking first appeared in the 1980s, as foreign patients purchased organs from providers in India, with doctors from the Gulf States performing the operations. ⁴² Initially, trafficking only occurred in India and some nations in South Asia, but the practice has spread, and traffickers are now targeting potential donors around the world. ⁴³ The European Parliament identified certain areas as more susceptible to illegal trafficking, including "Latin America, North Africa and other regions where the economic crisis alongside social and political instability create opportunities for traffickers."

Like the organ shortage, organ trafficking is a global problem. But make no mistake, they are not two sides of the same coin — the organ shortage fuels the illegal organ market causing the proliferation of human trafficking. The European Parliament reported, "[t]here is no doubt that the resulting structural shortage of legally obtained organs is the main cause of trafficking in organs." As time runs out for those on organ transplant waiting lists, it is only natural that patients look to the black market. The shortage of legally available organs has led to the rise of the illegal organ market, and the demand for illegal organs has caused the current upsurge in organ trafficking. 46

The illegal organ market is unregulated and provides no protection for patients or providers. To combat the trafficking of organs, nations have tried to raise awareness of human trafficking, and passed legislation to monitor national organ donations and transplants.⁴⁷ These preventative measures are weak and ineffective, because they do nothing to address the root of the problem — the overwhelming demand for organs. The illegal organ market allows patients who can afford to pay, and are willing to accept the risks, to secure an organ that an altruistic system may have never rendered. Even when an organ is secured, both the provider and the patient are at the mercy of unscrupulous brokers who facilitate the transaction.⁴⁸

^{40.} Id. at 11.

^{41.} *Id*.

^{42.} *Id*.

^{43.} European Parliament, *supra* note 6, at 13.

^{44.} Id. at 8.

^{45.} Id. at 16.

^{46.} *Id*.

^{47.} UNODC, *supra* note 21, at 46-50.

^{48.} Calandrillo, supra note 4, at 102.

The global prohibition on legal organ sales has, in essence, created a dual system for transplantation. There is the legal altruistic system, and the illegal system, which serves as a de facto marketplace in some nations. ⁴⁹ China and India have well known markets for organs, despite such transactions being expressly banned. ⁵⁰ As long as the demand is there, organ sales will continue in the unregulated black market. If governments are truly interested in protecting at-risk communities from human trafficking, they must bring the market into the open.

Aside from the harmful impacts of the criminal organ market, the notion that prohibiting organ providers from being compensated protects impoverished communities is questionable. The reality is that the current organ shortage disproportionately affects developing countries, particularly patients who are oppressed by crippling poverty⁵¹ — the disproportional effect of the organ crisis is further examined in Section IV (A). While wealthy patients can use the black market to find an illegal organ for transplantation, poor patients do not have the same luxury. Government intervention is needed to ensure that all patients have equal access to life saving organ transplantations.⁵²

Before discussing alternatives to altruistic transplantation systems, it is worthwhile to examine the shortcomings of altruism in the United States, and the complex social and legal dilemmas that surround organ prohibition in the land of freedom.

III. The Legal Rights Attached to the Human Body in the United States

As patients continue to die unnecessarily, governments are slowly becoming more receptive to alternatives to the current altruistic systems in place.⁵³ While the international community continues to drag its feet, change could be just one nation away. One prominent nation shifting away from a purely altruistic organ donation system could lead other nations to follow suit. The United States is the most logical nation to start a policy revolution,

^{49.} Jingwei, *supra* note 3, at 10, 11.

^{50.} *Id.* at 5.

^{51.} William G. Couser et al., The Contribution of Chronic Kidney Disease to the Global Burden of Major Noncommunicable Diseases, 80 KIDNEY INTERNATIONAL 1258, 1260 (2011).

^{52.} Calandrillo, supra note 4, at 101.

^{53.} Organ Trafficking and Transplantation Pose New Challenges, 82 BULLETIN OF THE WORLD HEALTH ORG. 9 (2004), http://www.who.int/bulletin/volumes/82/9/feature0904/en/.

as it is a leader in transplantation surgeries and medical innovation yet still severely impacted by the organ shortage crisis.

A. Why the United States and What Obstacles Are in the Way?

The first successful organ transplant occurred in the United States in 1954, when Dr. Joseph Murray and his team performed a kidney transplant between two twin brothers. This breakthrough changed the landscape of medicine. Organ transplantation is now an accepted part of medicine, and the United States performs a staggering number each year. In 2015, the United States accounted for nearly twenty-five percent of recorded organ transplants worldwide. However, despite reaching a new record high for transplantations in each of the last four years — a twenty percent increase in transplants from 2012 to 2016 — the national waiting list is well over three times the number of annual transplants. The medical community is beginning to question the merits of an exclusively altruistic system as the organ shortage continues to claim more lives — despite the fact that the total number of living organ donations has increased every year since 2012.

In the United States, the altruistic organ transplantation system is held in place by two key statutes: the Uniform Anatomical Gift Act (UAGA)⁵⁸ and the National Organ Transplant Act (NOTA). ⁵⁹ Due to scientific advancements in transplantations in the 1960s, the United States adopted the first Uniform Anatomical Gift Act in 1968. ⁶⁰ UAGA gave citizens the right to donate organs, eyes and tissue, which had never been established before. ⁶¹ Once immunosuppressive drugs were developed, there was a rise in

^{54.} Anthony Komaroff, Remembering Dr. Joseph Murray, A Surgeon Who Changed the World of Medicine, HARVARD HEALTH PUBLISHING, (Nov. 28, 2012), https://www.health.harvard.edu/blog/remembering-dr-joseph-murray-a-surgeon-who-changed-the-world-of-medicine-201211285590.

^{55.} See Organ Donation and Transplantation Activities 2015, supra note 6; UNITED NETWOK FOR ORGAN SHARING, https://unos.org/about/annual-report/2015-annual-report/ (last visited Mar. 23, 2018).

^{56.} Susan Scutti, U.S. Organ Transplants Increased Nearly 20 Percent in Five Years, CNN, (Jan. 9, 2017, 2:02 PM), https://www.cnn.com/2017/01/09/health/organ-donation-2016/.

^{57.} Organ Procurement & Transplantation Network, supra note 2.

^{58.} UNIF. ANATOMICAL GIFT ACT § 1 (UNIF. LAW COMM'N 2006).

^{59. 42} U.S.C.S. § 274e (LEXISNEXIS through PL 115-132).

^{60.} UNIF. ANATOMICAL GIFT ACT PREFATORY NOTE (LEXIS amended 2009).

^{61.} *Id*.

successful transplantations, causing an increase in the demand for organs.⁶² UAGA was revised in 1987 to account for the proliferation of transplantations, but the contents remained similar to the original act.⁶³ In 2006, UAGA was again revised to expand the scope of possible organ donors.⁶⁴

While UAGA defines who can provide an organ as an anatomical gift and legalizes organ donations as long as they are altruistic acts, the National Organ Transplant Act of 1984 expressly prohibits the sale or purchasing of organs for transplantation. Under NOTA, once an organ donation is no longer a gift, the act becomes criminal. The passage of NOTA was a response to a proposal by H. Barry Jacobs, an entrepreneurial physician, to create an organ brokerage system, called the "International Kidney Exchange."65 At the time, nearly 20,000 people with organs suitable for transplantation were dying each year, but only around fifteen percent of those organs were being recovered for transplant.⁶⁶ Dr. Jacobs proposed that the United States compensate organ donors, thus helping to address the organ shortage. 67 However, Congress disagreed, and quickly passed NOTA, maintaining that organ procurement should remain a "gift." 68 NOTA states, "[i]t 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."⁶⁹

Since its inception, NOTA has been amended to encourage more organ transplants. After amendment in 2008, NOTA no longer banned paired organ donations. The addition, NOTA permits compensating donors of renewable tissues, such as blood, sperm, and eggs. Oddly, eggs are not regenerable, but only one state does not allow the sale of a woman's eggs. NOTA's exception for renewable tissues was the catalyst for the Ninth Circuit case *Flynn v. Holder*, which resulted in the allowance of bone

^{62.} Id.

^{63.} *Id*.

^{64.} *Id*.

^{65.} Calandrillo, supra note 4, at 79.

^{66.} Id.

^{67.} *Id*.

^{68.} Id. at 79.

^{69.} National Organ Transplant Act, Pub. L. No. 98-507, 98 Stat. 2346-2347 (1984).

^{70.} John A. Robertson, *Paid Organ Donations and the Constitutionality of the National Organ Transplant Act*, 40 HASTINGS CONST. L.Q. 221, 224 (2013).

^{71.} *Id.* at 223.

^{72.} Id. at 232.

marrow donors to be compensated.⁷³ Bone marrow is a regenerable tissue, yet it is still banned by NOTA, causing even more confusion regarding NOTA's definition of an "organ."⁷⁴

NOTA's reference to "interstate commerce" might appear to suggest that NOTA is supported by the Constitution through the Commerce Clause. This seems like a stretch, given that the text of NOTA primarily involves organ procurement and monitoring transplantation data. Assuming for the sake of this analysis that the Commerce Clause will not save NOTA from a constitutional challenge, the question remains: is NOTA unconstitutional? Unfortunately, there is no easy answer, because the law provides no clear definition of what rights people have over their own bodies.

B. The Constitutionality of NOTA

Radhika Rao, a professor at the University of California, Hastings College of the Law — who currently serves on the California Human Embryonic Stem Cell Research Advisory Committee and is a former member of the California Advisory Committee on Human Cloning — outlined the complexities of legal rights when applied to the human body in her article, "Genes and Spleens: Property, Contract, or Privacy Rights in the Human Body?" Professor Rao explained that there is "confusion and chaos" surrounding the legal status of the body, because there is no legal consensus on what rights are attached to the human body. Professor Rao stated, "[s]ometimes the body is treated as an object of property, sometimes it is dealt with under the rubric of contract, and sometimes it is not conceived as property at all, but rather as a subject of privacy rights."

Common sense leads us to believe that our bodies are our own, and that no third party, including the government, should be able to usurp control. However, this right to bodily autonomy falls within the fundamental right to privacy, not property, because "bodily privacy is generally inalienable and unassailable." ⁷⁸ Sonia M. Suter, a professor at George Washington University Law School and a distinguished scholar on legal issues surrounding genetic material, explained the legal distinction between privacy

^{73.} Flynn v. Holder, 684 F.3d 852, 858 (9th Cir. 2012).

^{74.} Id. at 856.

^{75.} Radhika Rao, Symposium, Genes and Spleens: Property, Contract, or Privacy Rights in the Human Body, J.L. MED. & ETHICS (2007).

^{76.} Id. at 2.

^{77.} Id.

^{78.} *Id.* at 10.

and property rights in her article, "Disentangling Privacy from Property: Toward a Deeper Understanding of Genetic Privacy." Professor Suter clarified that property rights "connote control within the marketplace" and over something that is alienable from the person. 80 In comparison, privacy rights entail "control over access to the self as well as things close to, intimately connected to, and about the self."

The debate regarding the legal rights associated with the human body is outside the scope of this analysis, and the topic is explored in a large number of writings in academia. For the purposes of this analysis, the focus is NOTA and what rights it impacts. NOTA's primary function is to prohibit the sale of organs in the United States, not to limit or define organ donations, which the UAGA covers. Professor Suter stated that property rights involve "control within the market," meaning "the ability to buy and sell the object as a commodity." Privacy rights are not expressly implicated by NOTA, because a privacy analysis "treats the body as integrally connected to the person." By nature, organ commodification involves the separation of organs from the person, and treats the organ as a separate part of the donor, not the whole person. "84"

Due to NOTA, the United States strictly adheres to an altruistic organ transplantation system, which prevents donors from being compensated for their organs. NOTA involves the commercialization of organs, which implicates property rights. The constitutionality of NOTA hinges on what the Fifth Amendment defines as property. The Due Process Clause of the Fifth Amendment protects American citizens from federal overreach, stating that the government may not deprive citizens of "life, liberty, or property, without due process of the law." This begs the question: can a person claim that their body is legally their property?

C. Is Your Body Your Property?

The human body is and is not property, depending on who claims ownership. Courts have been willing to find ownership when the body is

^{79.} Sonia M. Suter, Disentangling Privacy from Property: Toward a Deeper Understanding of Genetic Privacy, 72 GEO. WASH. L. REV. 737 (2004).

^{80.} Id. at 746, 755.

^{81.} Id. at 746.

^{82.} Id. at 754.

^{83.} Rao, *supra* note 75, at 10.

^{84.} *Id*.

^{85.} U.S. CONST. amend. V.

being used for a commercial purpose, like research.⁸⁶ However, a person's body is not their private property, because the body is not property.⁸⁷ This confusing distinction is laid out in the marquee case for property rights in the body, *Moore v. Regents of the University of California*.⁸⁸

In *Moore*, John Moore ("Moore") discovered that he had hairy-cell leukemia, and began receiving treatments from Dr. Golde ("Golde") at the UCLA Medical Center.⁸⁹ Moore needed to have his spleen removed, and consented to the operation.⁹⁰ However, unbeknownst to Moore, Golde was aware that "certain blood products and blood components [of Moore's spleen] were of great value in a number of commercial and scientific efforts," and arranged to use parts of Moore's removed spleen for research before the operation took place.⁹¹ Using Moore's spleen, Golde created a cell line, named the "Mo cell line,"⁹² and patented the cell line before agreeing to commercially develop his work.⁹³

Moore later brought suit against Golde and the university, and the court found that Golde did breach his fiduciary duty by not informing Moore of his economic interest in Moore's spleen. However, the court did not find that Golde was liable for conversion, which is "a tort that protects against interference with possessory and ownership interests in personal property." Moore needed to have a property interest in his cells to go forward with a conversion claim, and the court was unwilling to extend ownership to Moore. The court ruled that once Moore's cells left his body, he no longer had an ownership interest in them, because he did not expect the cells back. Furthermore, after finding no case law to support Moore's conversion claim, the court added:

We do not find this surprising, since the laws governing such things as human tissues, transplantable organs, blood, fetuses, pituitary glands, corneal tissue, and dead bodies deal with human biological materials as

^{86.} Rao, *supra* note 75, at 7.

^{87.} Id.

^{88.} Moore v. Regents of the University of California, 51 Cal.3d 120 (Cal. 1990).

^{89.} Id. at 125.

^{90.} Id. at 126.

^{91.} *Id*.

^{92.} Id. at 166.

^{93.} Id. at 127.

^{94.} Id. at 133.

^{95.} Id. at 134.

^{96.} Id. at 137-38.

^{97.} Id. at 137.

objects of sui generis, regulating their disposition to achieve policy goals rather than abandoning them to general law of personal property. 98

The rulings in two later cases, *Greenberg v. Miami Children's Hospital*⁹⁹ and *Washington University v. Catalona*, ¹⁰⁰ further elaborated on the difference between commercial property ownership and personal property interests in one's own body. ¹⁰¹ In *Greenberg*, the plaintiffs were the parents of children afflicted with Canavan disease, a rare, and fatal, genetic disorder that frequently occurs in Ashkenazi Jewish families. ¹⁰² The plaintiffs had approached Matalon and asked him to discover the gene responsible for the Canavan disease. ¹⁰³ To further this end, they voluntarily provided Matalon with a vast supply of blood and tissue samples. Matalon eventually isolated the Canavan disease in 1993. ¹⁰⁴ However, without informing the plaintiffs, Matalon proceeded to patent the gene and related research, and restricted access to his research. ¹⁰⁵ The plaintiffs sued Dr. Matelon and the Miami Children's Hospital. ¹⁰⁶

The court relied heavily on *Moore*, finding that the plaintiffs voluntarily gave genetic material to Matalon for research, and that the genetic material did not qualify as property. Only when the isolated gene was commercialized did the genetic material become property, which supported Matalon's claim of ownership and right to patent his research. Dr. Matalon did not have a duty to inform the Greenbergs of his patent, because Matalon's role was that of a researcher, not a physician. Dr. Although Matalon's actions ran contrary to the wishes of the plaintiffs, whose biological material allowed the research to go forward, the court ruled that the donors held no property rights in the donated materials. The court stated, "the property right in blood and tissue samples evaporates once the sample is voluntarily given to a third party."

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98. Id.
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^{99.} Greenberg v. Miami Children's Hospital, 264 F. Supp. 2d 1064 (S.D. Fla. 2003).

^{100.} Washington University v. Catalona, 437 F. Supp. 2d 985, 1002 (E.D. Mo. 2006).

^{101.} Rao, supra note 75, at 3.

^{102.} Greenberg, supra note 99, at 1064.

^{103.} Id. at 1067.

^{104.} Id.

^{105.} *Id*.

^{106.} Id. at 1068.

^{107.} Id. at 1074.

^{108.} Id. at 1075.

^{109.} *Id.* at 1070-71.

^{110.} Id. at 1075.

^{111.} *Id*.

In *Washington University v. Catalona*, the district court stated that genetic material was not just the property of the researchers after it had been commercialized, but that the original material was the property of the researchers, not the donors. Washington University ("WU") sued its former employee, Dr. William Catalona, and his patients, who had agreed to participate in one or more of Dr. Catalona's research projects while he was working at WU. Catalona was a respected surgeon and medical researcher, and he was pivotal in establishing the GU Biorepository, which housed biological samples for prostate cancer research. Catalona's patients were asked to sign informed consent forms to allow Catalona to use their biological material for cancer research. The forms allowed patients to discontinue participation and withdraw their consent. In 2003, Catalona accepted a position at another university, and had his patients sign a release form allowing their genetic material to be transferred with Dr. Catalona.

WU filed for a declaratory judgment to stop Catalona from transferring the biological materials out of the GU Repository, which was housed in a WU owned building. Both WU and the patients who had supplied the biological materials claimed ownership, but the court ruled in favor of WU. The court held that, "plaintiff Washington University owns all biological materials . . . in the GU Repository," and, "neither Dr. William Catalona nor any research participant . . . has any ownership or proprietary interest in the biological samples housed in the GU Repository." Based on the language in the informed consent forms, participants gave their biological materials as a "gift," thus relinquishing any possessory interest. Despite the biological materials not having been used for research or developed for commercial use yet, the court granted ownership of the biological materials to WU, because participants were not allowed to withdraw their consent for already delivered materials.

A consistent theme in *Moore*, *Greenberg*, and *Catalona*, was concern for how medical research might be influenced by the courts' decisions. In

^{112.} Catalona, supra note 100, at 1002.

^{113.} Id. at 988-89.

^{114.} *Id.* at 988.

^{115.} Id. at 990.

^{116.} *Id*.

^{117.} Catalona, supra note 100, at 993.

^{118.} Id. at 987-88.

^{119.} Id. at 1002.

^{120.} Id.

^{121.} Id. at 1001.

^{122.} Id. at 1002.

Greenberg, the court feared that granting donors possessory interests in their genetic material "would cripple medical research." The court in *Catalona* expressed concern about the ramifications of allowing patients to dictate how and where their biological samples were used. The court theorized that patients might abuse this power, like a blood donor dictating to whom his or her blood could be donated based-on ethnicity or gender. The court stated, "This kind of 'selectiveness' is repugnant to any ethical code which promotes medical research to help all mankind."

Concern that medical advancement will be harmed is understandable, but the courts' fear has caused them to manipulate settled property law. Justice Broussard's dissent in *Moore* theorized that the majority did not intend to suggest "that a removed body part, by its nature, may never constitute 'property.'"¹²⁷ Hypothetically, Justice Broussard stated that if a drug company broke into UCLA Medical Center and stole Dr. Goude's Mocell line, the cells would be considered stolen property. 128 Professor Rao analogized the treatment of body parts to the legal status of animals, water, and other natural resources. 129 Professor Rao explained that because "body parts are free for appropriation by the scientists who transform them into useful products," the human body is treated as "a form of property that belongs to no one and is part of the public domain." However, treating body parts as a natural resource is illogical, because the source of a body part is always a person. All human biological material was at some point a part of a person, and taking this material is not the same as drawing water from a stream or mining coal from the ground. 131

In sum, the legal status of the human body is in disarray partly due to the public policy rationale that property interests of donors should not hinder medical research. If the Supreme Court of the United States were to affirm this policy argument in a future case, it would be much easier to comprehend the distinction between the possessory interest of researchers and individuals. As it stands, it would be difficult to challenge NOTA as unconstitutionally restricting property rights. NOTA, however, is a statute created by Congress, and a constitutional challenge is not the only way to

^{123.} Greenberg, supra note 99, at 1076.

^{124.} Catalona, supra note 100, 1002.

^{125.} *Id*.

^{126.} *Id*.

^{127.} Moore, *supra* note 88, at 153.

^{128.} Id. at 154.

^{129.} Rao. *supra* note 75, at 8.

^{130.} *Id*.

^{131.} *Id*.

strike it down. The legislature can amend or eliminate NOTA, and, in light of the growing unrest over the failure of the nation's current altruistic transplantation system, change may be inevitable.

D. Public Opinion Is Shifting Away from NOTA

Former Congressman Al Gore initially introduced NOTA for the purpose of keeping organ donations an act of kindness rather than for a profit, fearing that commercializing organs would only benefit wealthy Americans, and leave poor communities open to exploitation. As outlined earlier, this is still a key argument for those in favor of preserving the current altruistic system in the United States. However, this argument overlooks the very real ramifications of NOTA's prohibition. The government claims to have created NOTA to ensure the wealthy were not given greater access to organ transplantations than the poor, but in a country with no universal health insurance, this motive seems insincere. The organ shortage in the United States is so severe that an estimated three hundred Americans travel abroad each year to purchase an organ, subjecting themselves to the dangers of the black market. Growing numbers in the medical community are beginning to push for reform.

In October of 2014, thirty years after the creation of NOTA, ¹³⁵ a distinguished group of scholars and medical professionals in the United States wrote an open letter regarding kidney transplantation to President Barack Obama, Secretary of Health and Human Services Sylvia Mathews Burwell, Attorney General Eric Holder and leaders of Congress. ¹³⁶ The letter was a call for action, detailing how the current policy on organ donations was not working, and that the government was incorrect in its "unsubstantiated assumption" that providing benefits to organ donors would inevitably lead to donors "being exploited or coerced." ¹³⁷ The letter advocated for "the swift initiation of evidenced-based research on ways to

^{132.} Calandrillo, supra note 4, at 99.

^{133.} Id. at 100.

^{134.} Id. at 87.

^{135.} Robert A. Fisher et al., An Open Letter to President Barack Obama, Secretary of Health and Human Services Sylvia Mathews Burwell, Attorney General Eric Holder and Leaders of Congress, U.S. Transplant Open Letter (Oct. 2014), http://www.ustransplant openletter.org/openletter.html.

^{136.} *Id*.

^{137.} Id.

offer benefits to organ donors in order to expand the availability of transplants." ¹³⁸

The open letter outlined the inadequacy of the current policy on organ transplants, and specifically detailed the systems failure in regard to kidney transplants. 139 Not only would more kidney transplants save lives, but it would also alleviate a huge financial burden on the United States health care system. Seven percent of Medicare's annual budget was spent on patients suffering from kidney failure. 140 Each kidney transplant, however, saved Medicare over \$100,000 USD when compared to the cost of dialysis treatments. 141 From 2009 to 2014, despite efforts to reduce the wait time for a kidney transplant, the average waiting period increased by a year and a half. 142 In the face of growing expenses, mounting deaths, and with no end in sight, the letter pleaded for the government to begin looking at nonaltruism based policies. Aside from cash incentives and free health care, the letter also stated, "Additional benefits such as a pension contribution, tax credit, or charitable contributions in the donors' names should also be explored, particularly when those benefits will appeal to donors across the financial spectrum."¹⁴³ Post-altruistic policies should focus on how to entice all Americans to become donors, because, "Giving an organ need not fall disproportionately on people with lower incomes."144

Not only is the current system not working, it isn't fair. Adhering to altruism is only required of the organ supplier. Kenneth Newell, a former president of the American Society of Transplantation and a current transplant surgeon at Emory University, bluntly explained the reality of the United States system: "As a surgeon, I get paid... The hospital gets paid. The nephrologist gets paid. The patient gets a new kidney and perhaps gets to re-engage in his life's work. The insurer gets money... Everyone gets paid, except the donor." Preserving an unfair and inefficient system will exacerbate the already dire organ shortage. As more Americans each year find they need an organ transplant themselves, or have someone in their lives

^{138.} Id.

^{139.} *Id*.

^{140.} Id.

^{141.} *Id*.

^{142.} *Id*.

^{143.} Id.

^{144.} Id.

^{145.} Tina Rosenberg, *It's Time to Compensate Kidney Donors*, N.Y. TIMES, (Aug. 7, 2015, 5:15 AM), https://opinionator.blogs.nytimes.com/2015/08/07/its-time-to-compensate-kidney-donors/.

^{146.} Id.

who needs one, people will begin to grasp the reality of the situation and push for change. The medical community sees the tipping point coming, yet the legislature continues to hide behind NOTA.

The organ crisis presents a complex ethical, political, and legal dilemma in the United States. However, as stated earlier, the issues that the United States must overcome are apparent in other countries as well because the organ shortage is a global problem. Every nation deals with similar and distinct problems regarding organ transplantation. Though creating a uniform organ transplantation system, adopted and enforced by all nations, is unfeasible at this time, the global community can begin to make progressive policy decisions to alleviate the damage caused by the organ crisis.

IV. Modern Organ Transplantation Policies to Meet Global Demand

International policies will not shift away from purely altruistic systems overnight. Proper preparation and planning will be necessary for future organ transplantation systems, in order to ensure that the problems of the illegal organ market do not root themselves in new systems. As outlined above, while more medical professionals have begun to promote the sale and purchasing of organs, strong support for current altruistic policies remain. However, as policy makers grapple with arguments for and against continued adherence to the altruistic system, the organ deficit will continue to expand, and more people on waiting lists will be forced to wait helplessly for a miracle or death.

The solution to the global organ crisis does not need to be an all-ornothing policy shift. Allowing even one organ to escape the restrictions of altruistic policies would drastically decrease the number of fatalities. Data has shown that the demand for kidney transplants alone dwarfs the demand for all other organs combined. Kidneys are the starting point for postaltruism-based systems. By focusing on alleviating the growing demand for kidneys, whether through monetarily compensating kidney providers, or another incentive-based program, lives will be saved around the world.

A. Kidney Transplantations by the Numbers

Kidney transplants are the most frequently performed organ transplants in the world. Aid in the world. Kidneys are unique organs, because, while people are born with two kidneys, only one healthy kidney is necessary to sustain life. One healthy kidney can replace two diseased kidneys, making living donations a viable option. The kidney's job is to filter excess waste and fluid that has built up in the bloodstream. If a person suffers from End-Stage Renal Disease (ESRD), commonly referred to as kidney failure, that patient requires renal replacement therapy. There are only two medical procedures a patient can seek: dialysis and a kidney transplant. Dialysis can prolong a patient's life, but the treatment will never restore the health of the kidney. A patient receiving dialysis treatments will need to remain on dialysis for life. For those with kidney failure who hope to regain a sense of normalcy in their lives, receiving a kidney transplant is the only solution.

Kidney failure develops from chronic kidney disease (CKD).¹⁵² CKD has seen a worldwide increase in the last decade, and is expected to become dramatically more prevalent in developed countries in the next few decades.¹⁵³ In addition, the majority of people with CKD do not realize they have it, because there are few symptoms in the early stages of the disease.¹⁵⁴ CKD may not be discovered until kidney function is substantially impaired.¹⁵⁵ Kidney disease is caused by a number of factors, but the largest contributors are hypertension and diabetes.¹⁵⁶ Hypertension can cause and accelerate the decay of one's kidneys, and it is also a consequence of chronic kidney disease and kidney failure.¹⁵⁷ In developing countries, kidney failure is linked to hypertension or diabetes in fifty-one percent of cases.¹⁵⁸ In the most developed countries, forty-five percent of patients suffering from

^{147.} UNODC, supra note 21, at 7.

^{148.} *Kidney Transplants*, MAYO CLINIC, https://www.mayoclinic.org/tests-procedures/kidney-transplant/about/pac-20384777 (last visited Mar. 21, 2018).

^{149.} Id.

^{150.} Id.

^{151.} Couser, *supra* note 51, at 1258.

^{152.} *Id*.

^{153.} Id. at 1259.

^{154.} Id. at 1260.

^{155.} *Id*.

^{156.} Id. at 1259.

^{157.} Id. at 1262.

^{158.} Id. at 1259.

kidney failure also have diabetes. ¹⁵⁹ Unfortunately, the proliferation of diabetes does not appear to be slowing down. Over the past twenty-five years, the number of Americans with type 2 diabetes has nearly doubled. ¹⁶⁰ The situation is even worse in Asia, where type 2 diabetes rates have increased an estimated "three- to fivefold in India, Indonesia, China, Korea, and Thailand." ¹⁶¹

The global organ shortage is driven by the need for kidney transplants. 162 In 2014, an estimated 84.347 kidney transplants were performed globally, which made up nearly sixty-seven percent of all organ transplants for that year. 163 In addition, 41.8 percent of kidney transplants came from living donors, with living donors far exceeding cadaver organs in Africa, Eastern Mediterranean, and South East Asia. 164 It is estimated that around two million people worldwide suffer from kidney failure, but this figure may represent only ten percent of the number of people who actually need renal replacement therapy. 165 The United States has a staggering 95,300 people on the national kidney transplant waiting list, making up over 82 percent of the total organ waiting list. In 2017, approximately fiftyseven percent of organ transplants were kidneys (a little over 19,000 surgeries). 167 In 2013, the European Union, including Turkey, Iceland, and Norway, added 70,000 people to the kidney transplant waiting list, despite performing twenty-nine percent of global kidney transplants the previous year.168

Data regarding kidney failure and transplantation shows a dark disparity between developed and developing countries. In 112 developing countries, made up of over 600 million people, an estimated one million people die each year from untreated kidney failure. Because of the high cost of renal replacement therapy, the majority of the estimated two million people who need dialysis or a kidney transplant receive it in one of five countries: United

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159. Id. at 1261.
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^{160.} Id.

^{161.} Id.

^{162.} Garwood, supra note 17.

^{163.} Organ Donation and Transplantation Activities 2015, supra note 5.

^{164.} Id.

^{165.} Couser, supra note 51, at 1259.

^{166.} Organ Procurement & Transplantation Network, supra note 2 (last visited Mar. 20, 2018).

^{167.} Id.

^{168.} Journalist Workshop on Organ Donations and Transplantation: Recent Facts & Figures, supra note 12.

^{169.} Couser, supra note 51, at 1259.

States, Japan, Germany, Brazil, and Italy. 170 In the bottom fifty percent of the world's population, only twenty percent of people suffering from kidney failure receive treatment. 171 Developed countries have made treatment more accessible by expanding dialysis programs, and trying to make transplantation more available. 172 Unfortunately, for those in developing countries, kidney failure remains a death sentence. 173 In addition, kidney donation data shows a trend of racial and gender bias. For example, a study in India showed that females were the donors in sixty-six percent of kidney transplantations but were recipients only seventeen percent of the time.¹⁷⁴ Moreover, in the United States, the organ shortage disproportionately disadvantages minorities. People of color comprise over forty percent of those on the national waiting list, and account for more than half of the deaths.¹⁷⁵ The fear that moving away from altruistic donation policies will lead to exploitation of impoverished and marginalized people is blind to the fact that these people are already feeling the brunt of the ongoing organ crisis.

B. Legalizing Kidney Transactions

Altruistic organ transplantation systems have failed to meet the demand for organs, creating the current highly lucrative illegal organ market. The foundation of any marketplace is supply and demand, and the black market is only allowed to thrive because the legal supply is incapable of meeting the need for organs. International organ transplantation systems must adapt to the current crisis, and one potential life-saving solution would be for countries to create national kidney markets.

The black-market deals extensively in illegal kidneys because it is not necessary to kill someone to obtain one of their kidneys, although people are sadly still murdered for their organs. Unscrupulous organ brokers, the middlemen between desperate parties, use cash payouts, deceit, and violence to obtain organs, and target poor and desperate people already marginalized by society and poverty. ¹⁷⁶ In Pakistan, for example, most voluntary donors

^{170.} Id.

^{171.} Id.

^{172.} Id.

^{173.} Id.

^{174.} Ghods, supra note 15, at 1142.

^{175.} Michele Goodwin, Altruism's Limits: Law, Capacity, and Organ Commodification, 56 RUTGERS L. REV. 305, 311 (2004).

^{176.} Calandrillo, supra note 4, at 102.

receive half the compensations they were originally promised by black market brokers. 177

Regulation and legalization will stop black market exploitation and help disseminate critical information regarding kidney donations to potential donors. Much like the legalization of marijuana in the United States, nations will need to establish policies and regulations regarding the sale of kidneys. ¹⁷⁸ An overarching international organization, whether it is an existing entity or a newly formed one, could establish rules and regulations to ensure safety and fairness to all parties who wish to participate. Compensating kidney donors is the foundation that countries can build upon to create new transplantation systems and lessen the demand for organs that fuels the illegal market. Fortunately, Iran has had a functioning kidney market since 1988, which can be studied as a possible model for other nations moving forward.

C. Middle Ground Between Altruism and Commercialization – The Iranian System of Kidney Transplantation

The first kidney transplant in Iran was performed in 1967, and over the next eighteen years approximately 100 total transplantations occurred. The From 1985 to 1987, the number of transplantations exploded due to the construction of two transplantation centers. During that span, 274 transplantations were performed, and all the kidneys came from living relative donors. However, the national kidney transplant waiting list continued to swell, because Iran had not yet established a deceased donor program, and patients who could not secure a kidney from a relative were left with no options for transplantation.

In 1988, Iran implemented a "government funded, regulated, and compensated living-unrelated donor renal transplantation program." By 1999, there were no patients on the national waiting list. By 2005, seventy-eight percent of kidney transplants performed in Iran were from living-

^{177.} Jingwei, supra note 3, at 5.

^{178.} See Memorandum of James M. Cole, Deputy Attorney General, on Guidance Regarding Marijuana Enforcement (Aug. 29, 2013) (on file with U.S. Department of Justice).

^{179.} Ghods, supra note 15, at 1137.

^{180.} Id.

^{181.} *Id*.

^{182.} *Id*.

^{183.} *Id*.

unrelated donors.¹⁸⁴ Patients are referred to the Dialysis and Transplant Patients Association (DATPA), where they are matched with unrelated donors, removing any need for a broker or agent.¹⁸⁵ The transplants are performed at university hospitals and the government pays for all medical costs.¹⁸⁶ Donors receive the equivalent of \$1,200 USD, medical insurance and immunosuppressive drugs paid for by the government or charitable organizations.¹⁸⁷ In addition, sellers often receive a "rewarding gift" from the recipient, or from a charitable organization if the recipient is too poor to afford a gift.¹⁸⁸ The system is closely overseen by the Iranian Society for Organ Transplantation.¹⁸⁹

Based on the Iranian system, allowing the sale and purchasing of organs would help the international community combat the growing organ deficit. However, commercializing organ transactions is not a miracle solution, and the Iranian system has its flaws. 190 The Iranian system has poor postoperation follow up protocols for organ providers and recipients. 191 Also, illegal activities have still found their way into the government operated system. Despite eliminating the national waiting list, transplantations still usually take about a year to be arranged, and rich Iranians often work with brokers to bypass this delay. 192 However, the purpose of analyzing the Iranian system is not to promote it as the perfect solution, but as a functional supplement to an exclusively altruistic system. Like the open letter to President Obama advised, nations need to begin gathering data about alternative organ transplantation systems. At this point, there is no agreed upon transplant system that all nations would adopt. What is known is that current altruistic systems do not work because people continue to die waiting for organs to become available for transplantation.

If organ transplantation systems were viewed on a spectrum, altruistic donation would be on one end and commercial procurement of organs at the other. While Iran is still the only nation to legalize the sale of kidneys, ¹⁹³

^{184.} Id.

^{185.} Id.

^{186.} *Id*.

^{187.} Id. at 1138, 1141.

^{188.} Id. at 1141.

^{189.} Id. at 1138.

^{190.} See Shashank Bengali & Ramin Mostaghim, 'Kidney For Sale': Iran Has A Legal Market For Organs, But The System Doesn't Always Work, L.A. TIMES, (Oct. 15, 2017, 3:00 AM), http://www.latimes.com/world/middleeast/la-fg-iran-kidney-20171015-story.html.

^{191.} Rosenberg, supra note 145.

^{192.} Bengali, supra note 190.

^{193.} Ghods, *supra* note 15, at 1137.

other nations are beginning to explore options in between altruism and commercialization. Two systems within the middle of the spectrum have emerged that warrant serious consideration. Some nations are beginning to implement reimbursement programs for kidney providers to ease their financial burden, while other nations are creating opt-out organ donation programs to facilitate more organ recovery from cadavers.

D. Reimbursement Programs

A study published in the American Journal of Transplantation, reported that in 2009, twenty-one countries had implemented some kind of reimbursement program for living organ donors. These reimbursement programs target five major types of cost that are incurred by organ donors: travel, accommodations, meals, lost income, and childcare. Of the twenty-one countries with reimbursement programs, the majority only reimbursed donors for travel, lost wages, and accommodations. Only ten countries had comprehensive programs that addressed all five major costs in some capacity. Reimbursements are covered in a variety of ways, including through insurance, charitable organizations, and government funds. In some nations, like the United Kingdom, lost wages are covered by the organ provider's employer, through sick or paid leave.

The Health Minister of Australia, Tanya Plibersek, made it clear that Australia would never endorse the sale of organs, but supports providing some financial relief to kidney providers. Kidney providers are not given monetary payments, but the government does provide a donor with up to six weeks paid leave. Other nations, like Saudi Arabia and Israel, offer long-term health and life insurance, along with other creative incentives. Saudi

^{194.} M. Sickland et al., Reimbursing Live Organ Donors for Incurred Non-Medical Expenses: A Global Perspective on Policies and Programs, 9 AMERICAN J. OF TRANSPLANTATION 2825, 2827 (Nov. 2009), https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1600-6143.2009.02829.x.

^{195.} Id.

^{196.} Id.

^{197.} Id.

^{198.} Id.

^{199.} Id.

^{200.} Sickland, supra note 194, at 2827.

^{201.} Rashida Yosufzai, *Live Donors to Get Financial Support*, THE AUSTRALIAN, (Apr. 7, 2013, 2:44 PM), https://www.theaustralian.com.au/news/latest-news/living-donors-to-receive-financial-support/news-story/a5751fe5b68c4191eb9403d1620f0918.

^{202.} Sickland, *supra* note 194, at 2834.

Arabia provides a ticket discount on national airlines for kidney donors, while Israel offers donors free entrance to national parks.²⁰³

Internationally, there is an accepted distinction between reimbursing living organ donors and providing compensation that results in financial gain for organ providers — the latter is still illegal internationally. In 2008, the Declaration of Istanbul on Organ Trafficking and Transplant Tourism, the European Parliament, and the Asian Taskforce on Organ Trafficking, each urged their respective member states to create avenues that allowed reimbursing living organ donors. Advocates for keeping organ donations strictly altruistic cannot deny that organ donations do require sacrifices aside from the actual organ. Lessening the burden on organ donors does not necessarily contradict the values promoted by altruism. The act of giving an organ is still, at its core, based on human kindness even in countries that have implemented reimbursement policies.

E. Opt-in Programs

Nations that refuse to consider any form of compensation for living organ donors, monetary or not, will need to look to cadavers to ease the pressure of the organ crisis. Transplant organs removed from cadavers are highly regulated, ²⁰⁵ and there is a great deal of international support for them. In 1999, a study in the United States showed roughly seventy five percent of Americans supported the idea of having their organs used for transplantation upon their death. ²⁰⁶ However, only around twenty-five percent of Americans had actually registered to be organ donors. ²⁰⁷ While individuals may support the concept of posthumous organ donations in theory, an underwhelming number of people actually take the necessary steps to become donors.

In an article for the WHO Bulletin, University of Valparaiso Professor Alejandra Zuniga-Fajuri, Ph.D., detailed how some nations, including Chile, have enacted presumed consent legislation to increase the number of posthumous organ donations. Presumed consent policies, or opt-out systems, presume an individual consents to donate their organs unless the individual expressly refuses to become a potential donor. Opt-in systems

^{203.} Id.

^{204.} Sickland, *supra* note 194, at 2826.

^{205.} UNITED NATIONS OFFICE ON DRUGS AND CRIME, *supra* note 21, at 7.

^{206.} Calandrillo, supra note 4, at 73.

^{207.} Id.

^{208.} Sickland, *supra* note 194, at 199.

^{209.} Id.

require individuals to expressly consent to becoming donors.²¹⁰ Countries that have opt-out systems have posthumous donation rates twenty-five to thirty percent higher than opt-in countries, although evidence shows that this increase is not entirely due to presumed consent policies.²¹¹ A number of countries have implemented opt-out policies, including Austria, Belgium, the Czech Republic, Finland, France, Greece, Hungary, Israel, Italy, Spain, Slovenia, Norway, Poland, Sweden, and Turkey.²¹²

In addition to presuming consent, some opt-out systems include a priority rule to determine priority for patients who need a transplant.²¹³ In Singapore, an individual who expressly refuses to donate organs posthumously gives up priority for receiving an organ in the future.²¹⁴ This opt-out system provides an incentive for individuals to not opt-out, because they are given priority if they need a transplant in the future.²¹⁵ The opt-out system, with the priority rule, has caused an increase in posthumous organ donations in Singapore.²¹⁶ Israel implemented a similar system in 2010, but with a much more complex priority system, involving donor cards, priority points, living organ donations, and different tiers of priority for future organ transplants.²¹⁷ Since implementing this system, Israel has seen a significant increase in organ transplantations.²¹⁸

Professor Zuniga-Fajuri explained that giving priority to individuals who remain in opt-out donation systems is consistent with the values of altruism. Professor Zuniga-Fajuri stated, "The principle is consistent with the view that a fair concept of justice calls for reciprocal altruism, because organs may be considered a scarce societal resource." The priority rule might lead to fewer purely altruistic organ donations, but the purpose is not to commercialize organs. Rather, the priority rule aims to keep "free-riders" from taking advantage of the system. It would be unfair if someone were willing to receive an organ through the opt-out system, yet refused to

^{210.} Id.

^{211.} *Id*.

^{212.} *Id*.

^{213.} *Id*.

^{214.} *Id*.

^{215.} *Id*.

^{216.} *Id*.

^{217.} *Id*.

^{218.} *Id*.

^{219.} Id. at 200.

^{220.} Id. at 201.

^{221.} Id. at 200.

be an organ donor posthumously.²²² Professor Zuniga-Fajuri added that the goal of opt-out systems with priority rules is not to punish those who refuse to be donors, but to "prompt people who opted out of donor programmes to reconsider their choice."²²³

Like all other transplantation systems, the opt-out system has flaws. Chile's opt-out system, enacted in 2010, got off to a rocky start due to misinformation.²²⁴ A survey showed that seventy percent of Chileans did not know the scope of the new system, and did not understand the details of the opt-out system. ²²⁵ Of those surveyed, sixteen percent thought the system was regulated by the market, twelve percent thought that only wealthy individuals received organs for transplantation, and thirteen percent even believed that health-care providers would let patients die in order to harvest their organs. 226 Because of this misinformation, 2,780,223 Chileans had opted out of the system by July 2012.²²⁷ To combat this, the government created a priority rule, and required future individuals who refused to be posthumous organ donors to provide a notarized statement expressly rejecting presumed consent.²²⁸ It is still too early to tell if the Chilean system will be successful, ²²⁹ but what is important is Chile's willingness to change its policies to remedy the shortage of organs available for transplantation. Only by trying alternatives to purely altruistic systems can the international community find a solution to the organ crisis.

V. Conclusion

The world needs more organs to become available for transplantation. Clearly, current altruistic systems, relying exclusively on human kindness, have not been able to provide enough organs to meet the growing demand. The best organ transplant system is the one that facilitates the most transplantations and saves the most lives. The aversion to any semblance of body part commodification is not only resulting in unnecessary deaths, it is supporting a black market that is dangerous to organ providers and patients. Nations need to be proactive and explore different incentives to encourage

^{222.} Id.

^{223.} Id.

^{224.} *Id*.

^{225.} Id.

^{226.} Id.

^{227.} Id.

^{228.} Id.

^{229.} Id.

voluntary organ providers from all walks of life, not just poor communities. There may not be one model that will work for all countries, but whatever model a country chooses to adopt must ensure that there are sufficient organs available for anyone who needs one.

Altruism can coexist with monetary compensation or other alternative inducements to donate. People who choose to donate organs altruistically will continue to donate under new transplantation systems — incentives are for those who would not, or could not, otherwise donate their organs. To maximize available organs, national policies must allow for altruistic donors, and non-altruistic organ providers. Certainly, more people will be willing to donate their organs if the cost of the procedure, including lost wages and other related costs were reimbursed by the government or a charitable organization. A straightforward, transparent, strictly regulated policy, applied fairly and evenly, would produce more organs for transplantation, and save countless lives.