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An ethical appraisal of living-anonymous kidney donation using Adam Smith's *Theory of Moral Sentiments*

Vishal Khetpal [a,b], Elias Mossialos [a,c,*]

[a] *Department of Health Policy, London School of Economics and Political Science, Houghton Street, London, WC2A 2AE, United Kingdom*
[b] *Warren Alpert Medical School of Brown University, RI, 02912, United States*
[c] *Institute of Global Health Innovation, Imperial College London, St Mary's Hospital London, W2 1NY, United Kingdom*

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ABSTRACT

Ethical debates continue to shape organ transplant policies, particularly for kidneys. Facing organ shortages, governments have created incentives targeting prospective living-anonymous donors - socially and biologically unrelated to the recipient. However, these policies may transform altruistic exchanges of tissues into trades of commodities.

We use Adam Smith's concept of sympathy to outline a new approach to transplantation ethics. This is accomplished using a case study analysis of six countries with established living-anonymous kidney donation practices – Iran, Israel, the Netherlands, Saudi Arabia, the United Kingdom, and the United States. An ethical test was also developed from ethnographies of donors and Smith's Theory of Moral Sentiments. The case study analysis considered the role of religious and historic norms, media campaigns, adherence to the 2008 Declaration of Istanbul guidelines for each case, and how each factor related to Smith's sympathy, categorizing the countries into four tiers of altruism. Iran occupied the least altruistic tier, followed by the Netherlands, the UK and the US, and Saudi Arabia and Israel. The ethical test identified a similar ranking. Our findings suggest that a highly-selected cohort of states with established living-anonymous kidney donation programs may already utilize a Smithian approach for recruiting donors, and that socially-valued government incentives can preserve altruism. The ethical test could become a useful instrument to assess the altruism of emerging incentive policies.

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1. Introduction

Since it was first successfully achieved, in 1954, kidney transplantation has emerged as the preferred renal replacement therapy for patients afflicted with end-stage renal disease, or ESRD [1]. Kidneys have historically been supplied from two primary sources: individuals who died in relatively good health, and living individuals related or emotionally attached to the recipient. As stakeholders have sought to understand the social implications of organ commodification, both living and deceased donation has been traditionally branded an act of altruism, and providing compensation for an organ's value remains illegal in most jurisdictions [2]. Yet the global supply of kidneys is far exceeded by the demand from ESRD patients. Faced with endless waiting lists and inevitable death, patients pay exorbitant prices to brokers working for organ trafficking rings, harvesting kidneys from vulnerable populations across the developing world [3].

Notable among recent efforts to resolve the shortage is using organs procured from 'living-anonymous donors' (also referred to as living-undirected and altruistic donors). Unlike deceased donors, from whom kidneys are procured posthumously, or *directed* living kidney donors, who identify a specific recipient for their organ, living-anonymous kidney donors have no relation or emotional attachment to the recipient [4]. Although living-anonymous donation is legally sanctioned in many countries, it remains underutilized. The motivations of living-anonymous donors have historically been questioned by the public, viewed as pathological; however, social sentiment has recently grown more receptive to this practice [5,6]. Furthermore, although evidence remains inconclusive, living kidney donation does not appear to confer significant changes in clinical outcomes and lifespan [7–9]. Given this public support, governments have reconsidered the importance of altru-

* Corresponding author at: Department of Health Policy, London School of Economics and Political Science, United Kingdom.
E-mail addresses: e.a.mossialos@lse.ac.uk, e.mossialos@imperial.ac.uk (E. Mossialos).

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ism in kidney transplant practices, implementing compensation policies for living-anonymous donors to ethically increase kidney supplies, alongside pursuing policies such as 'opt-out' deceased organ donation [10,11]. In doing so, however, authorities have been accused of deliberately changing the nature of organ transplants from an altruistic exchange of gifts into a trade of commodities [12].

The ideologically and ethically fraught nature of attitudes to organ donation and commodification has left the current global state of matters unclear. Scholars have previously applied ethical theories to questions in organ donation, such as Hoffmaster and Hooker's employment of compromise within tragic choice to resolve conflicts in organ allocation policy [13]. In a similar vein, attempting to inject clarity into this debate, we revisit the philosophical conceptualization of human behaviour and altruism in Adam Smith's *Theory of Moral Sentiments*.

Although both the *Theory of Moral Sentiments* and Smith's *sympathy* have been extensively debated since they were first published, Smith's work has benefitted from a resurgence of interest in recent years, as philosophers apply its tenets to contemporary issues within ethics and political theory [14]. As a product of the Scottish Enlightenment, the *Theory of Moral Sentiments* goes to great lengths to reconcile emotion against logic and ethics – factors which continue to persist within tense bioethical debates, including those relevant to living-anonymous kidney donation. Today, Smith's *sympathy* remains more influential, and bears more relevance to the organ ethics debate than Hume's take on this concept. Smith accounts for transfer of emotions through imagination, such as that employed by an individual who considers anonymously donating his or her kidney, rather than through Hume's inference generated by social cues alone [15,16].

We hypothesize that, in particular, Smith's understanding of *sympathy* is able to facilitate a more complete bioethical understanding of living-anonymous kidney donation than what is available today. We further hypothesize that elements of a *Smithian* approach to donation ethics are already intuitively utilized by countries with high rates of living-anonymous kidney donation, and could be operationalized to engineer effective incentives and resolve the global kidney shortage while preserving altruism.

In this essay, we take up two primary objectives. First, we introduce a novel adaptation of Smith's sympathy to re-examine the ethics of policies to recruit living-anonymous organ donors. And second, we test the hypotheses outlined above through a two-pronged methodology – a case study analysis assessing organ transplant practices in six selected countries with high rates of living-anonymous donation, and a novel quantitative ethical test applied to the case studies as a sensitivity analysis.

1.1. The current state of organ donation ethics

Based on their views on the subject, historically, we categorized scholars as having any one of four philosophical approaches to organ donation ethics – *altruistic*, *economic*, *pseudo-altruistic*, and *critical*. Each has had varying influence within national organ transplant policies. Social movements and policy regimes, such as the post-war welfare state and the rise of neoliberalism in the 1980s, have shaped each approach as an extension of global health politics.

The altruistic approach – drawing upon Richard Titmuss's seminal work, *The Gift Relationship* – advocates strictly voluntary means to increase organ supplies, particularly for kidneys [17,18]. Proponents of the economic approach, in contrast, call for institutionalizing legalized organ markets, providing donors with market-determined compensation [19,20]. The pseudo-altruistic approach, influenced by Julian Le Grand's 'knights and knaves' theory, supports using incentives rather than free markets to recruit living-anonymous donors [10,21]. The critical approach evolved from critiques of living-anonymous kidney donation, asserting that this procedure should be entirely avoided, as it cannot be ethically navigated [22,23].

Although all of these approaches have been intellectually valuable to framing the ethical discussion surrounding organ donation, they also bear substantial weaknesses. Practically speaking, they have operated under considerably different ethical boundaries, and have allowed trending ideological movements to inform policy. Furthermore, the current philosophical approaches to living-anonymous kidney donation have been inadequate in resolving the global kidney shortage, and ultimately in capturing the nuance of human behaviour related to actions surrounding this clinical practice. A standardized framework, incorporating themes from the four approaches, and capable of facilitating a more complete modelling of human behaviours – ranging from the altruistic, to the pseudo-altruistic, to the purely self-interested under different sets of stresses – is greatly needed to advance the ethical discussion surrounding organ donation ethics today.

1.2. Adam Smith's concept of sympathy

Smith's *Theory of Moral Sentiments*, first published 1759, may be able to address critical gaps within the existing organ donation ethics literature, and may offer a unifying framework for human behaviour. Smith's moral philosophy relies on the concept of *sympathy*, which Smith defines as "our fellow-feeling with any passion whatsoever"; interestingly, to Smith, all human motivations and behaviours which involve "imaginatively changing places" with another exhibit sympathy, whether positive or negative [24]. As he later asserts, both self-interest – engaging with sympathy for the "self" – and beneficence – engaging with sympathy of others – are inspired by universal tendencies among individuals to sympathize [25].

At the core of Smith's theory is the *impartial spectator*, mediating between personal needs and the needs of others, while influenced by social contexts including sociocultural norms, past experiences, and moral and religious values [24,26]. However, precisely these considerations, factoring into the construction of sympathy, also invalidate any truly plausible impartiality for the *impartial spectator*. Consider Smith's hypothetical case of a European man learning of an earthquake slaughtering the entire population of China; Smith contends that, although the man may initially express "sorrow for the misfortune of that unhappy people," he will likely move on "with the same ease and tranquillity, as if no accident had happened" after a short time [24]. In contrast, Smith says, if the same man permanently loses a finger, his trivial disaster will more deeply concern him [24]. As this reflects, Smith's allegedly impartial spectator may promote sympathies and behaviours that are logically irrational but socially rational – a category that should include the altruism expressed by living-anonymous kidney donors in contemporary organ exchange practices.

To explain such cases, Smith develops the construct of mutual sympathy. His mutual sympathy represents an alignment of sympathies between the individual and his or her peers, drawn from two fundamental urges: a desire for others to express sympathy, and a presumed guarantee of assistance between individuals sharing mutual sympathy [24]. Smith affirms that pleasure or pain gathered from mutual sympathy is "by no means the sole cause of either," and is modulated by not only the character of passions, but also the degree of their expression by others [24]. This multidimensional mutual sympathy seems to defines Smith's behavioural characterization of humanity, as seekers of social reinforcement for the general correctness of their sympathies.

The impartial spectator may also be influenced by the social proximity existing between actors. In Smith's terms, social proximity builds from mutual sympathy, and closer relations imply shared

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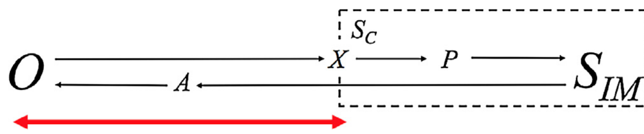

Fig. 1. Schematic of Smith's behavioral decision-making mechanism.
Line *OX* would represent Smith's spectrum of sympathy, on which *A* could position itself in altruistic, egoistic, or pseudo-altruistic states – determined by the judgment of the impartial spectator and the mutual sympathy conferred by social context. Line *AX* would indicate the degree of altruism expressed by the individual, with a greater length representing a stronger expression of this sentiment, and vice versa.

social norms and greater altruism [25]. In this regard, social proximity aligns Smith's moral philosophy with present-day theories of altruism in sociobiology; specifically, Smith suggests that care and attention first be given to one's self, then one's immediate family, followed by one's earliest friendships, extended family, etc., and ultimately one's society and country [24]. Indeed, sociobiologists have constructed theories explaining altruistic acts – which Smith perceives as benefiting others – as attempts by individuals to contribute to the continuation of shared genetic material [25,27].

Smith also observes that affections along genetic lines deteriorate with physical separation [24,25]. Here, his framework departs from sociobiological theory – designating social closeness, rather than genetic preservation, as the central driver of altruism.

1.3. Smithian approach to organ donation ethics

Given its ability to conceptualize a broad range of sentiments – whether positive or negative, mild or passionate – through the concept of sympathy, Smithian moral philosophy's tenets make it a strong tool for critiquing current organ donation ethics, and policies surrounding living-anonymous kidney donation in particular. A Smithian approach to organ donation ethics would craft incentives from the perspective of altruism arriving from shared social norms, governed by mutual sympathy and social proximity.

To assess organ donation practices across contexts, we must operationalize the expressions of different behaviours by a Smithian individual within their 'spectrum of sympathy', ranging from altruism to egoism. Fig. 1 depicts this mechanism, and demonstrates its compatibility with the collected anecdotes from altruistic donors discussing their motivations. Line *OX* represents Smith's spectrum of sympathy, from altruistic to pseudo-altruistic and egoistic states – as determined by impartial spectator judgments and mutual sympathy conferred by social context. Line *AX* indicates individual altruism; greater length represents stronger altruism.

Donors often recall exposure to an initial stimulus *X* (for example, a visit to a dialysis centre or a TV special on living donation), connecting them to the plight of ESRD patients. These experiences trigger an emotional response *P*, akin to Smith's 'passion', incorporating feelings of sorrow and duty [28,29]; individuals then process this passion through the lens of Smith's impartial spectator S_{IM}. At this stage, the self more rationally assesses the costs and benefits of engaging in altruistic kidney donation within their social context S_C, often in ways affected by personal understanding of risk, before proceeding with clinical testing for organ donation [29,30]. The deliberation of the impartial spectator ultimately formulates a sympathy *A*, projected back towards the source of the original stimulus –patients in need of a kidney transplant.

Within this framework, a Smithian approach would cultivate positive mutual sympathies, lengthening *AX* (altruism). Given that a sympathy-centric definition of altruism heavily relies upon sociality, a Smithian approach to the ethical issue at hand would also invite us to draw a distinction between *monetarily-valued* and *socially-valued* incentives. For the purposes of this study, monetarily-valued incentives are defined as compensatory benefits offered to donors or their families which are valued through monetary means, generally acquirable through alternative means and fungible in nature. We have defined socially-valued incentives, in contrast, as benefits which require social recognition or interaction to realize their value, and are generally unattainable through alternative means. Given the emphasis placed on shared social norms underlying acts of altruism according to Smith's theory, socially-valued incentives would be considered to be more altruistic than monetarily-valued ones, as they require the continuous actions of others in society to realize their value.

2. Methods

This paper presents a novel application of Smith's *Theory of Moral Sentiments* (as understood above) to understand the ethics of living-anonymous kidney donation and test it through a mixed-methods approach. A descriptive case study analysis was designed to identify factors impacting kidney donation in countries with prolific living-anonymous kidney donor rates. The case studies were chosen through a selection process, outlined in the following section. Additionally, a quantitative ethical test was developed based on a Smithian approach, scoring the relative altruism associated with organ donation within each of the case studies. Both analyses utilized the same materials, which included peer-reviewed literature, legislative documents, international consensus documents, government websites outlining specific policies on living-anonymous kidney donation, public information records, and press coverage of organ donation in each of the countries studied in this work. Materials were identified in a semi-systematic manner, utilizing keywords such as the names of the countries themselves, "living-anonymous kidney donation," "altruistic kidney donation", and "compensation policies for organ donation,". In the case study methodology, more granular searches were performed to investigate the three studied factors in closer detail, using key works such as "religion and organ donation in [name of country]" and "media campaigns for organ donation in [name of country]".

The mixed methods approach attempts to minimize the potential confirmation bias introduced within the case study analysis, through ensuring that relevant data is examined through both qualitative and quantitative lenses. In this cross-case analysis, we employ the ethical test to the case study methodology as a sensitivity analysis, to investigate similarities and differences between the two approaches' findings and to scrutinize the case study findings.

Additionally, each case study has been compared against the Declaration of Istanbul, an accord developed in 2008 outlining ethical guidelines regarding organ trafficking, transplant tourism, and living-donor compensation policies. The document was drafted by a steering committee of medical and legal professionals, government emissaries, and bioethicists representing 78 countries [31].

2.1. Selection of case studies

Because altruistic kidney donor figures are unavailable for most countries, overall living kidney donor rates, collected from the International Registry on Organ Donation and Transplantation (IRODaT) between 2010 and 2014, were used as a proxy, as these rates have been found to trend closely with one another in multiple contexts [32]. Eighty-four countries submitted data to IRODaT, which served as the baseline for case study selection. States were included for analysis based on three primary criteria: if (1) complete living kidney donor data were available, (2) living-anonymous kidney donation was legal and common, and (3) compensation policies were readily identifiable. These criteria were specified to ensure that selected countries would have an established prac-

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Table 1
Three themes assessed in altruism-egoism test.

Questions	Post-operative interview theme	Smithian sympathy domain
#1, #6	Donor's sense of moral duty	Mutual sympathy
#2, #5	Donor–recipient relationship and recipient's well-being	Social proximity
#3, #4	Donor's social and physical well-being	Social context

tice of living-anonymous kidney donation that was amenable to a qualitative analysis of relevant, state-specific documents and publications through a case-study methodology (Appendix B in Supplementary material).

After these criteria were applied, the six states remaining with the highest living kidney donor rates were considered for case study analysis (see Appendix B in Supplementary material): the Netherlands, Iran, the United States, the United Kingdom, Saudi Arabia, and Israel. Because organ donation policies in the US are highly heterogeneous, the state of New York was used, as it has had more living-anonymous kidney transplants than any other state since 1988 [32].

2.2. Developing a Smithian ethical test

A novel quantitative ethical test, derived primarily from Smith's *Theory of Moral Sentiments*, was devised to further test the case studies (including both specific incentives and general status of organ donation). Both authors were involved in the development of the questions and scoring mechanisms employed in the test.

The test had six questions: three on specific incentive policies and three on the general organ donation environment (for each case). These questions explored three prevailing themes linking Smithian sympathy to organ donation ethics (Table 1; the test itself, as well as rationales for the inclusion of each question and its relationship to Smithian sympathy, is in Appendix A in Supplementary material). They were formulated based on post-operative interviews of donors from previous studies, and each theme was linked to the three domains of sympathy elaborated in *Theory of Moral Sentiments* – mutual sympathy, social proximity, and social context (Table 2). [24,29,33,34] The final ethical test developed from this study is outlined in Table 3.

Themes related primarily to social reinforcement, or relying upon the alignment of social cues, were linked with the general theme category of the "donor's sense of moral duty and social affirmation," and the Smithian theme of mutual sympathy. For many of the themes, the social reinforcement was positive, such as for compelled altruism and inherent responsibility. For others, like neglect, the social reinforcement was negative, manifesting regret in the decision of living kidney donors to part with their organ.

Smith's social context, and the general theme category of the "donor's social and physical well-being", were aligned with themes that related to social position after the donation event, as well as the personal psychological effects of donation. As with the mutual sympathy themes, positive and negative influencers were present among the themes uncovered in the post-operative interviews. Both social and personal well-being were aligned with social context due to their potential to impact personal belief systems, outlook, and ultimately decision making on the part of Smith's impartial spectator on living-anonymous kidney donation.

Social proximity, the categorization process, was linked to the general theme category of the "donor-recipient relationship and the recipient's well-being". Frequently, the themes encountered in this section mediated altered relationship between donors and families, as well as donors and recipients (if known), after the transplant surgeries. In particular, these themes introduced interest or concern with the well-being of individuals within the sociobiological hierarchy outlined by Smith's sympathy, as described in the penultimate paragraph of Section 1.2.

Scoring for each answer was categorical, yielding a fixed numerical score ranging from 0 (indicating pure self-interest) to 1 (indicating pure altruism). Scores were assigned to answers in a step-wise fashion, capturing a full spectrum between egoism and altruism.

To further discuss the scoring used in the ethical test, consider question #2: "how are organs allocated by the state?". Through researching global organ allocation practices, we identified four methods employed by governments today, and assigned them scores in a step-wise fashion ranging from most egoistic (0 points) to most altruistic (1 point). If countries prioritized organs through

Table 2
Categorization of post-operative interview themes.

Cited Literature	Post-operative interview theme	General interview category	Smithian sympathy domain
[27]	Compelled altruism	Donor's sense of moral duty and social affirmation	Mutual sympathy
[31]	Connected to others		
[32]	Identification with recipient		
[27]	Inherent responsibility		
[32]	Moral duty to help		
[27]	Neglect		
[27]	Depression and guilt	Donor's social and physical well-being	Social context
[27]	Fear and vulnerability		
[27]	Hero status		
[27]	New appreciation to life		
[27]	Personal growth and self-worth		
[32]	Self-benefit from the improvement of the recipient's help		
[27]	Sense of loss		
[27]	Spiritual confirmation		
[27]	Unable to resume previous activities		
[31]	Uneasy negotiation of others		
[27]	Accepting risks	Donor–recipient relationship and recipient's well-being	Social proximity
[27]	Family pressure		
[27]	Multiplicity of roles		
[27]	Personal benefit		
[27]	Proprietorial concern		
[27]	Strengthened bonds with family and recipient		

Table 3
Smithian altruism-egoism test.

	Question	Smithian sympathy domain	Post-operative interview theme	Category
#1	Has the national transplant centre, civil society organizations, or other stakeholders made strong, active efforts to positively improve perceptions of organ donation in the state of interest, in the form of initiatives such as multimedia campaigns?	Mutual sympathy	Moral duty	General
#2	How are organs allocated by the state?	Social proximity	Relationship and well-being of the organ recipient	General
#3	Are health services provisioned for altruistic kidney donors post-operatively?	Social context	Personal social and physical well-being	General
#4	Is the compensation granted to the donor or their family an unusual social occurrence, and does it have positive implications for their social status?	Social context	Personal social and physical well-being	Incentive
#5	Who is the primary beneficiary of the awarded incentive?	Social proximity	Relationship and well-being of the organ recipient	Incentive
#6	Is the donation monetarily or socially valued?	Mutual sympathy	Moral duty	Incentive

international allocation systems, they were assigned 1 point for the question; if they allocated organs throughout their country, they were assigned 0.66 points; if they allocated organs to only regional areas of a country, they were assigned 0.33 points; and finally, if they only allowed for directed organ donations, they were assigned zero points. This question tests organ allocation practices through an application of Smith's notion of social proximity, as mentioned previously in Section 1.2. In this case, programs allowing for organ allocation across national borders was deemed most altruistic, followed by programs confining organs to specific countries, regions, and finally cases where living-anonymous kidney donations must be directed by the donor to a recipient. Because there were four answers to this question, the number of points allocated to an answer increased in increments of 0.33 points, from most egoistic to most altruistic.

This ethical test used multi-step scoring to minimize confirmation bias. To ensure that each domain of Smith's sympathy was fairly assessed, total scores for each discernible incentive were calculated as an average of its domain- (or theme-) specific scores. The same process was used for calculating the general scores, assessing the broader organ donation environment, for each case study. Then, total altruism-egoism scores were determined for each case study (weighted as incentive score 75%, general score 25%). Because scores ranged from 0 to 1, no further normalization or data treatment was required.

2.3. Selection criteria for questions in ethical test

As noted, composition of the Smithian altruism-egoism ethical test was informed by post-operative interviews with living kidney donors regarding their motivations and experiences, conducted by past researchers [29,33,34].

Although an array of themes was discussed in these studies, three emerged as most consequential to donor motivations and experiences: a natural sense of moral duty to help someone in need, the effects of organ donation on the donor's social and physical well-being, and the donor's relationship with the recipient and their community. Themes identified in these interviews were placed within the context of Smith's three core domains: social context, social proximity, and mutual sympathy.

These themes show compelling links to domains within Smith's theory of sympathy. In particular, mutual sympathy is invoked in donors' sense of moral duty; the donor's social and physical well-being is directly related to the social context of organ donation in their community; and the health of the donor–recipient relationship, as well as that of the recipient post-operatively, is tied to social proximity. These themes are discussed further in Appendix A in Supplementary material.

2.4. Limitations of the methodologies

Although this essay employs rigorous methodologies in its application of tenets embedded within *Theory of Moral Sentiments* to the ethics of living-anonymous kidney donations, its results should be understood within the context of its limitations. Because of the necessary literature needed to undertake the case study methodology, the states examined in this essay were chosen through a highly-selective process; the sample of states studied in this work, therefore, may not be representative of all states engaging with living-anonymous kidney donation. The case studies selected may also conform to the norms of other philosophical approaches not discussed in this essay. Our understanding of organ donation ethics could benefit from future research addressing this limitation.

The three thematic drivers discussed in the case study methodology were chosen with brevity in mind, as they collectively offer a fairly detailed picture of the state of living-anonymous kidney donation in the case studies. Other factors, such as organisational structures, could certainly influence the environment impacting policy around this bioethical issue in each case, and deserve closer examination in future work.

With attention to the ethical test, we recognize that it could benefit from the input of a diverse array of stakeholders. In particular, a consensus-oriented approach could be utilized in determining the scoring mechanism, the weighting of the questions, and if other questions regarding organ donation policy and cultural milieu would be relevant for assessing altruism in living-anonymous kidney donation.

3. Results

3.1. Case study analysis

To identify the cultural environment(s) and policy markers associated with higher rates of organ donation and to assess the global state of organ commodification today, a multi-site case study was undertaken across six countries. Although this study is interested in altruistic kidney donation specifically, only transplant data for overall living kidney donations was uniformly available, and was ultimately used as a proxy for this study. It is assumed from previous transplant data trends that rates of altruistic kidney donation closely correspond with rates of living kidney donation across most contexts [32]. Reports from national governments and the World

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Health Organization, press coverage pertaining to organ donation practices in the different case studies, as well as scholarly work related to social perceptions of organ donations in the case studies and policy developments regarding living-anonymous kidney donation were considered in this case study analysis.

For the purposes of the case study analysis three thematic drivers, underlying incentives targeting living kidney donors, were scrutinized: religious and historic norms, mass media and targeted media campaigns, and adherence to the Declaration of Istanbul (DoI) – an international guideline ratified in 2008 which proposed several incentives for organ donors. Although other factors may also mediate aspects of living-anonymous kidney donation in different case study sites, we believe that, collectively, these drivers offer a vivid description of the behaviour of stakeholders addressing kidney shortages through this policy instrument. Furthermore, these drivers were specifically studied as aspects of them could be reasonably compared against analogues found among the case studies.

Additionally, each driver appears to have an analogue within Smith's theory. It should be emphasized, however, that each is also in conversation with the philosophy as a whole. Religious and historic norms address Smith's social context, as both involve the cultural milieu in which an individual – an impartial spectator – decides whether to engage in living-anonymous donation. The media campaigns theme addresses Smith's mutual sympathy, especially in terms of enriching the social value conferred by donation. The DoI addresses Smith's social proximity by mediating aspects of the donor–recipient relationship.

We found that incentives across the six studied cases, except Iran, offered a mix of monetarily- and socially-valued incentives. Both of these terms, drawing from Smith's notion of sympathy-centric altruism, were defined and briefly discussed in Section 1.3.

3.1.1. Religious and historic norms

Religious and historic norms characterizing social systems impacted views on organ donation in each case country. In three of the cases, the religious landscape is dominated by one, cohesive religious tradition: Jewish in Israel, Shia Muslim in Iran, and Sunni Muslim in Saudi Arabia. It should be noted that for the United States, it was not found in the literature that Christian leaders have not taken vocal stances on organ donation. Leading voices in both Islam and Judaism have engaged in heated debate over the legitimacy of organ donation within their religious legal frameworks, drawing upon multiple interpretations of ancient texts to interpret this novel practice [35].

Sunni and Shia Islamic scholars have historically sounded scepticism over organ donation, particularly from the deceased, reasoning that it violates the sanctity of the human body. However, an emerging consensus among Islamic scholars today supports living and deceased organ donation as aligned with Muslim ideals of altruism and charity. This support was legitimized by fatwas in Saudi Arabia in 1982 and in Iran in 1989, respectively [36,37]. Jewish scholars have also taken issue with organ transplant practices, from dead and living donors [38]. Religious figures have questioned donor safety during procedures; however, as outcomes for living donors have improved, this concern has subsided.

Within more secular states, religious values still factor into people's organ-donation decision-making. Official informational literature on living and deceased donation published online in the US and UK has covered prevailing views across major religions [39,40]. Historic perceptions of health professionals and hospitals have also shaped cultural views on organ donation. For example, racial disparities in transplant waitlists and donor demographics in the US and the UK have been empirically attributed to prevailing racial minority mistrust in health systems [41].

Under Smith's concept of sympathy, these factors most closely impact the social context surrounding organ donation.

3.1.2. Mass media and targeted media campaigns

Mass media and targeted media campaigns by both governments and private stakeholders were observed to improve the social context and mutual sympathy associated with organ donation, in three of the case studies (the Netherlands, the UK, and the US) especially. These campaigns seem to correct a muddied narrative of organ donation in popular culture, to rebrand it with ideals of heroism, collectivism, and duty [42,43]. Stories of ESRD patients are frequently used to generate public awareness of organ shortage across media such as television, social media and mobile applications, urban murals, and print journalism. Although these campaigns are primarily designed to increase organ donor registration rates, it seems that they have also made a positive impact on recruiting living-anonymous kidney donors.

In the Netherlands, a 2007 reality television show, *Der Grote Donorshow* (*The Big Donor Show*), featured a terminally ill woman seeking to donate a kidney to one of twenty-five patients waiting for a transplant [44,45]. The competitive element attracted controversy both in the Netherlands and abroad, as viewers watched interviews with candidate recipients who struggled with dialysis and other debilitating health issues typical of ESRD patients while stuck on waitlists. After the show was revealed as a hoax, thousands of Dutch citizens registered as organ donors, surpassing registration rates achieved by previous government campaigns.

The UK's National Health Service created its first public service announcements on organ donation in 2009, featuring a young boy with ESRD and couples discussing organ registration over Valentine's Day dinner [46]. Additionally, in 2015, the NHS used the mobile dating application Tinder – in which users swipe the screen right or left to accept or reject other users' profiles and match with them – to deliver a media campaign involving celebrities supporting organ donation. Users received a message saying 'if only it was that easy [as swiping right] for those in need of a life-saving organ to find a match' [47].

In New York, media campaigns have increased increasing organ registry rates and living-anonymous kidney donor rates. The civil society organization LiveOnNY coordinated a targeted media campaign in 2014 which sought to address unusually low organ registration rates in New York City by 'rallying around those waiting for an organ, and celebrating those who step-up to save them' [48]. As its centrepiece, the campaign released an animated advertisement that had garnered over 305,000 views on YouTube as of July 2017 [49].

In Smithian terms, this thematic driver closely aligns with mutual sympathy, as positive media campaigns can socially reinforce the intention to follow through with living-anonymous kidney donation. It should also increase the value of social incentives, favoured within Smith's paradigm, and the general social status of organ donors. Mass media campaigns may additionally have an impact on the social context of organ donation itself, as it may influence personal morals and perceptions of this clinical practice.

3.1.3. Existing international guidelines

In all the cases except Iran, governments adhered strongly to the DoI, on proposals involving social recognition, medical and psychological care, and reimbursement of expenses for donors [31]. Wage compensation, reimbursement of travel and health expenses, and medals of honour were particularly popular in five of the six countries. Strikingly, the incentives in the DoI are directed towards the donor and mostly monetary, except the call for providing social recognition; however, all the case countries except Iran also created additional social incentives for living-anonymous kidney donors.

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Table 4
Incentives by case.[a]

Beneficiary	Country/State	Monetarily-valued Incentives	Socially-valued Incentives
Donor	Iran	Payment of 10 million rials, or USD 306, by civil authority; negotiated payment between donor and recipient (commonly up to 150 million rials, or USD 4600); health insurance for up to one year	N/A
	Israel	Wage compensation; private medical insurance; psychological follow-up services; perioperative expenses	Certificate of recognition; free admission to national parks
	the Netherlands	Wage compensation; health insurance related to donation event	N/A
	New York (USA)	Wage compensation	State and national donor medals of honour
	Saudi Arabia	Reimbursements for travel expenses, lost income, and medical care up to 50,000 riyals, or USD 13,332	Donor medal of honour; organ donor ID card
	United Kingdom	Needs-based reimbursement of lost income and travel expenses by NHS trusts	N/A
Donor and family	Iran	N/A	N/A
	Israel	N/A	N/A
	the Netherlands	Travel and accommodation expenses	N/A
	New York (USA)	Tax deduction up to USD 10,000	N/A
	Saudi Arabia	Airfare discounts with Saudi Arabian Airlines	N/A
	United Kingdom	N/A	Donor medal of honour
Family	Iran	N/A	N/A
	Israel	Life insurance	Priority access for future organ transplants
	the Netherlands	N/A	N/A
	New York (USA)	N/A	N/A
	Saudi Arabia	College entrance assistance	N/
	United Kingdom	N/A	N/A

[a] Iran [51]; Israel [52,53]; the Netherlands [54]; New York [53–57]; Saudi Arabia [58,59]; United Kingdom [60,61].

Incentives and policies in the DoI closely aligned with Smith's theme of social proximity, as the agreement regulates a fair and transparent allocation of organs in relation to the donor, and ensures that incentive recipients are the donor or the donor's family. The agreement, however, also carries negative implications for Smithian mutual sympathy, as most of the recommended incentives are monetary rather than social.

3.1.4. Summary of case study analysis

Except Iran and the Netherlands, all studied countries used a mix of monetary and social incentives to recruit living-anonymous donors (Table 4). The implementation of these incentives evolved within the context of three societal drivers – religious and historic norms, media influence, and adherence to pre-existing international guidelines. The first two took on a different character across the different case study states, while the latter was a fixed influence on the case studies. Additionally, under Smith's paradigm, the wide adoption of monetarily-valued incentives proposed in the DoI suggests that kidneys are gradually becoming commodified globally. Based on the detailed findings, we can classify the relative state of commodification of kidneys across the case studies into four tiers, representing four identifiable pathways our sample set of countries have taken to address kidney shortages within their borders.

Iran is in the first, most egoistic tier, with its practice of market-pricing kidneys. It perhaps is using a market-based approach to resolving its kidney shortage to overcome historically significant barriers to organ donation emerging from religious beliefs. Although this approach has successfully addressed the demand for renal replacement therapy for ESRD patients in Iran, the kidney market has inadvertently created perverse norms, and has likely exploited the socially disenfranchised. One retrospective ethnography found that, when asked after selling their kidney, most surveyed kidney donors in Iran would rather beg for money than engage in organ trade. It additionally found that medical professionals regularly coerce potential donors into selling their kidneys after initial laboratory tests [50].

The Netherlands occupies the second tier, employing mostly monetarily-valued incentives recommended by the Declaration of Istanbul, such as reimbursement for wages or travel expenses. Public efforts to increase organ donor registration rates, as well as the efforts of private stakeholders, such as *Der Grote Donorshow*, may perhaps represent a means to rebrand organ donation as an act of heroism, duty, and sacrifice. These efforts would subsequently introduce positive nudges to mutual sympathy and social context in living-anonymous donation practices.

The UK and New York occupy the third tier, offering incentives similar to the Netherlands, alongside socially-valued incentives – like donor medals of honour given by civil society groups, as well as both state and national governments – outlined in the Declaration of Istanbul. Like the Netherlands, both may be relying upon media campaigns, undertaken by the private and public sector, to further promote positive changes to mutual sympathy and social context to organ donation.

Israel and Saudi Arabia occupy the fourth, more altruistic tier, using a relatively even mix of monetarily- and socially-valued incentives, particularly directed towards families, which have achieved substantial increases in organ donation rates. Both states, like Iran, and notably unlike the Netherlands, the UK, and New York, have faced formidable barriers regarding the religious and historic norms of organ donation. To overcome negative features of Smith's social context in national perceptions of organ donation, Israel and Saudi Arabia have seemingly chose to innovate new policies to recruit living-anonymous kidney donors, rather than rely upon recommendations from the Declaration of Istanbul. The mix of monetarily- and socially-valued incentives suggests that organ exchange in these countries is best described as 'pseudo-altruistic'.

3.2. Ethical test analysis

Despite the diversity of policies across case studies, all the examined polities barring Iran could be considered relatively pseudo-altruistic – that is, with values close to 0.5, considering altruism as 1 and egoism as 0 on the scale – according to the ethical test. These ethical test results converge with the case studies' conclusions, regarding classification both of the six examined states and of individual policies (Table 5; Fig. 2).

Further detail regarding the methodology and development of this test may be referenced in 2.2. The composite scores, assess-

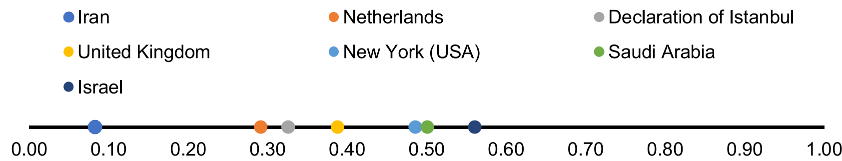

Fig. 2. Composite scores for case studies: Illustration of each case study scored using the ethical test developed in this work, with a score of 0 corresponding to full egoism, and 1 to full altruism.

Table 5
Composite system and incentive scores for case studies.

State	System Score	Incentives Score	Total Score
Iran	0.33	0.00	0.08
Netherlands	1.00	0.06	0.29
Declaration of Istanbul	0.55	0.25	0.33
United Kingdom	0.72	0.28	0.39
New York (USA)	0.44	0.50	0.49
Saudi Arabia	0.72	0.43	0.50
Israel	0.89	0.45	0.56

ing both the general features of living-anonymous kidney donation and the individual incentives offered by the states of interest, stratify the six jurisdictions – Iran scoring as virtually egotistic, the Netherlands and the UK as less pseudo-altruistic, and New York, Saudi Arabia, and Israel as more pseudo-altruistic (Fig. 2; Table 5). The DoI scored within the range of the second stratum. This scheme is similar to the one that emerged from the case study, with exception to the classification of New York. suggesting that the ethical test largely captures the core issues expressed in this previous analysis. Scoring of all implemented policies in the case jurisdictions is described in Appendix C in Supplementary material.

Composite scores for case studies: Illustration of each case study scored using the ethical test developed in this work, with a score of 0 corresponding to full egoism, and 1 to full altruism.

4. Discussion

The similar findings of the case study analysis and the ethical test – designed in particular to test the relevance of Smith's theory to the modern bioethical questions regarding living-anonymous kidney donation – suggests that our first hypothesis was not disproven. To be clear, other frameworks may be applicable to the bioethical qualms of living-anonymous kidney donation. However, the purpose of this essay is first, to test if Smith's *Theory of Moral Sentiments* is among these relevant frameworks. And second, it's purpose is to determine if Smith's philosophy is ultimately an improvement to the established four approaches outlined in Section 1.1, regarding its ability to unpack the motivations of stakeholders seeking to resolve kidney shortages through this organ procurement source in their respective countries.

Stakeholders do appear to intuitively utilize principles of Smith's moral philosophy related to altruism in their living-anonymous kidney donation practices. Furthermore, our findings allow us to revisit the theoretical discussion underscoring the rationale for introducing Smith's *Theory of Moral Sentiments* to the bioethical issue of living-anonymous kidney donation, and to ultimately compare the *Smithian* approach to the historical approaches outlined in Section 1.1.

Titmuss's altruistic approach has been a mainstay within organ donation policies globally, introducing language to organ donation such as "the gift of life", since the publishing of *The Gift Relationship* in 1970. Although it has managed to pin back the commodification of organ donation – and the adverse social outcomes associated with it – critics have asserted that the altruistic approach has not been adequate in resolving the global kidney shortage. From a theoretical perspective, the spectrum of behaviours captured by a truly altruistic approach is also insufficient. The Smithian approach appears to correct this deficiency, by effectively modelling the mostly pseudo-altruistic, and egoistic, incentives and policies detailed in both analyses. It offers greater nuance. For example, it suggests that *some* element of altruism is at work in the Saudi Arabian incentive of offering ticket discounts on the national airline to donors and families, rather than characterizing it as entirely egoistic. Along similar lines, a Smithian approach is able to incorporate behaviours driven by sociality and altruism missing in the economic approach.

Although the pseudo-altruistic approach does support the use of incentives by governments to recruit living-anonymous donors, the Smithian approach appears to offer greater elaboration in differentiating between the incentives themselves. In particular, Smith's work alludes to a delineation between monetarily-valued and socially-valued incentives, and ultimately, is able to characterize the incentives along a spectrum of sympathy. A donor medal of honour offered by the government, for example, carries different implications within this framework from tax deduction offered by that same government for organ donation.

Even with the analyses offered it is challenging to compare the Smithian approach to the critical approach, as the latter framework asserts that living-anonymous kidney donation cannot be ethically navigated, and that donors are implicitly commodified even without the use of compensation. A comparison of both approaches hinges upon the timeline of emerging technologies – such as artificial organs – capable of resolving the global kidney shortage sometime in the future.

Pivoting toward policy implications, the results of case study analysis, outlined in Section 3.1.4, suggests that a highly-selective sample of diverse countries have taken three distinct pathways to address national kidney shortages through living-anonymous donation. Revisiting these four pathways, the first and fourth are most politically intensive, as they require stakeholders to rebuild the legal treatment of kidneys as either commodities or gifts holding tangible social value. Interestingly, these pathways were utilized by states with strong religious forces permeating both political and social life. This may reflect the cultural challenges of promoting organ transplant within highly religious contexts. In contrast, the secular states relied more upon the second and third pathways, targeted media campaigns, and upon enforcing the mostly monetarily-valued incentives proposed by the DoI.

The novel test employed produced a similar ranking of states to the case study methodology. The placement of New York, however, slightly differed between the two methods, with the case study methodology placing it on the same tier as UK, while the ethical test placed it on the same tier as Saudi Arabia and Israel. Interestingly, New York likely scored higher than expected on the ethical test due to its particularly high incentive score, as it offers both a national and state donor medal of honour to organ donors (Table 5; Appendix C in Supplementary material). The United Kingdom, in contrasts offers only one donor medal of honour to organ donors. The ethical test also scored wage and travel expense compensation for donors the same as purchasing a kidney (as one can legally in Iran), desp

More generally, however, the ethical test appears to capture Smith's nuanced understanding of altruism, as it yields higher scores for socially-valued incentives and incentives benefitting families of organ donors (Table 6; Appendix C in Supplementary material). Its results also corroborate the assertion that the second pathway is the one most influenced by increases in mutual sympathy, and the third pathway most influenced by positive changes to the social context of organ donation. Within this particular work, this test also appears to have good internal consistency, as it successfully scored Iran's legalized kidney market as highly egoistic and as it aligned with the case study results.

Revisiting the second hypothesis, the ethical test empirically suggests that countries with established practices of living-anonymous kidney donation, except Iran, intuitively utilize a Smithian approach to resolve the challenge of increasing the supply of donor kidneys available. In this regard, the test shows promise for examination of organ donation policies across other jurisdictions, beyond what may be feasible using traditional qualitative methodologies, which can encounter challenges such as subjectivity and a larger needed time investment to perform. With refinements, particularly to scoring mechanisms and weighting, the test may come to be usable to inform and engage stakeholders seeking to address kidney shortages within their jurisdictions, and to engineer incentive policies which preserve the altruistic nature of organ donation itself.

5. Conclusion

This essay attempts to build an original theory for assessing organ donation ethics, distilling the moral philosophy of Adam Smith's Theory of Moral Sentiments into a reflexive decision-making mechanism to understand patterns of human behavior associated with living-anonymous kidney donation. We hypothesized that Adam Smith's concept of sympathy bore relevance to the ethical questions posed by government policies regarding living-anonymous kidney donation. We also hypothesized that a *Smithian approach* to increasing living-anonymous kidney donor rates, that is, one that promotes socially valued incentives, has already been operationalized by countries with particularly high rates of living kidney donation.

The results of both the case studies and the ethical test support both hypotheses, and produced highly similar rankings to one another. The case study analysis – scrutinizing religious and historic norms, mass media influences, and adherence of incentives to recommendations the Declaration of Istanbul – suggested that the degree of altruism expressed in the six cases could be stratified into four tiers. Iran occupied the least altruistic tier, followed by the Netherlands, the UK and New York, and finally Saudi Arabia and Israel as most altruistic. The ethical test analysis resulted in a similar scheme, with exception to the placement of New York in the same tier as Saudi Arabia and Israel, rather than with the UK.

The results also suggest that, in a select sample of diverse countries with establishing living-anonymous kidney donation practices, have considered different means to recruit donors. Iran, an outlier in our case studies, created a free market for organ donation. The rest of our case studies achieved donor recruitment through the use of monetarily-valued and socially-valued incentives, as well as employing media campaigns design to characterize organ donation as an act of duty, heroism, and sacrifice. Smith's concept of sympathy suggests that socially-valued incentives, rather than monetarily-valued ones, may be able to preserve altruism in living-anonymous kidney donation in the future.

Given the similar results of the two methodologies, the ethical test appears capable of assessing the altruism of organ donation policies in a broad range of countries. We acknowledge that the test itself could benefit from further revisions and refinement, and look forward to pursuing this task in future work.

Conflict of interest

The authors of this essay have no conflicts of interest to declare regarding this work.

Appendix A–C.

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References

[1] Ibrahim HN, Foley R, Tan L, Rogers T, Bailey RF, Guo H, et al. Long-term consequences of kidney donation. New England Journal of Medicine 2009;360:459–69, http://dx.doi.org/10.1056/NEJMoa0804883.

[2] Becker GS, Elias JJ. Introducing incentives in the market for live and cadaveric organ donations. The Journal of Economic Perspectives 2007;21:3–24, http://dx.doi.org/10.1257/jep.21.3.3.

[3] Delmonico FL. The implications of Istanbul Declaration on organ trafficking and transplant tourism. Current Opinion in Organ Transplantation 2009;14:116–9, http://dx.doi.org/10.1097/MOT.0b013e32832917c9.

[4] Weimar W, Zuidema W, de Klerk M, Haase-Kromwijk B, IJzermans J. Altruistic kidney donation. The Lancet 2006;368:987, http://dx.doi.org/10.1016/S0140-6736(06)69407-5.

[5] Howard DH. Producing organ donors. The Journal of Economic Perspectives 2007;21:25–36, http://dx.doi.org/10.1257/jep.21.3.25.

[6] Henderson AJZ, Landolt MA, McDonald MF, Barrable WM, Soos JG, Gourlay W, et al. The living anonymous kidney donor: lunatic or saint? American Journal of Transplantation 2003;3:203–13, http://dx.doi.org/10.1034/j.1600-6143.2003.00019.x.

[7] Spital A. Public attitudes toward kidney donation by friends and altruistic strangers in the United States. Transplantation 2001;71:1061–4, http://dx.doi.org/10.1097/00007890-200104270-00009.

[8] Matas AJ. Incentives for organ donation: proposed standards for an internationally acceptable system. American Journal of Transplantation 2012;12:306–12, http://dx.doi.org/10.1111/j.1600-6143.2011.03881.x.

[9] Sickand M, Cuerden MS, Klarenbach SW, Ojo AO, Parikh CR, Boudville N, et al. Reimbursing live organ donors for incurred non-medical expenses: a global perspective on policies and programs. American Journal of Transplantation 2009;9:2825–36, http://dx.doi.org/10.1111/j.1600-6143.2009.02829.x.

[10] Rippon S. Imposing options on people in poverty: the harm of a live donor organ market. Journal of Medical Ethics 2014;40:145–50, http://dx.doi.org/10.1136/medethics-2011-100318.

[11] Hoffmaster B, Hooker C. Tragic choices and moral compromise: the ethics of allocating kidneys for transplantation. Milbank Quarterly 2013;91:528–57, http://dx.doi.org/10.1111/1468-0009.12025.

[12] Shapiro MJ. Reading "Adam smith": desire, history, and value. Lanham, Md: Rowman & Littlefield Publishers; 2002.

[13] Muller HD. Sympathy for whom? Smith's reply to Hume. Journal of American Philosophical Association 2016;2:212–32, http://dx.doi.org/10.1017/apa.2016.15.

[14] Fleischacker S. Adam Smith's moral and political philosophy. In: Zalta EN, editor. Stanf. Encycl. Philos. 2015. Winter.

[15] Titmuss RM. The gift relationship: from human blood to social policy. Exp sub edition. New York: The New Press; 1970.

[16] Koplin JJ. From blood donation to kidney sales: the gift relationship and transplant commercialism. Monash Bioethics Review 2015;33:102–22, http://dx.doi.org/10.1007/s40592-015-0035-x.

[17] Arrow KJ. Gifts and exchanges. Philosophy & Public Affairs 1972;1:343–62.

[18] Hippen BE. In defense of a regulated market in kidneys from living vendors. The Journal of Medicine and Philosophy 2005;30:593–626, http://dx.doi.org/10.1080/03605310500421397.

[19] Grand Le, Knights J. Knaves or pawns? Human behaviour and social policy. Journal of Social Policy 1997;26:149–69, http://dx.doi.org/10.1017/S0047279497004984.

[20] Dalal AR. Philosophy of organ donation: review of ethical facets. World Journal of Transplantation 2015;5:44–51, http://dx.doi.org/10.5500/wjt.v5.i2.44.

[21] Elliott C. Doing harm: living organ donors, clinical research and the Tenth Man. Journal of Medical Ethics 1995;21:91–6, http://dx.doi.org/10.1136/jme.21.2.91.

[22] Smith A. The theory of moral sentiments. Cambridge: Cambridge University Press; 2002.

[23] Khalil EL. Adam Smith and three theories of altruism. Rech Économiques Louvain 2001;67:421–35.

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[24] Weinstein JR. Sympathy, difference, and education: social unity in the work of Adam Smith. Economics and Philosophy 2006;22:79–111, http://dx.doi.org/10.1017/S0266267105000714.
[25] Wilson EO. Kin selection as the key to altruism: its rise and fall. Social Research 2005;72:159–66.
[26] Gohh RY, Morrissey PE, Madras PN, Monaco AP. Controversies in organ donation: the altruistic living donor. Nephrology Dialysis Transplantation 2001;16:619–21, http://dx.doi.org/10.1093/ndt/16.3.619.
[27] Tong A, Craig JC, Wong G, Morton J, Armstrong S, Schollum J, et al. “It was just an unconditional gift.” Self reflections of non-directed living kidney donors. Clinical Transplantation 2012;26:589–99, http://dx.doi.org/10.1111/j.1399-0012.2011.01578.x.
[28] Challenor J, Watts J. “It seemed churlish not to”: how living non-directed kidney donors construct their altruism. Health (N Y) 2014;18:388–405, http://dx.doi.org/10.1177/1363459313501358.
[29] Steering Committee of the Istanbul Summit. Organ trafficking and transplant tourism and commercialism: the Declaration of Istanbul. The Lancet 2008;372:5–6.
[30] Living donor transplants in the U.S. by state. Rockville, MD: Organ Procurement and Transplantation Network (OPTN); 2016.
[31] Clarke A, Mitchell A, Abraham C. Understanding donation experiences of unspecified (altruistic) kidney donors. British Journal of Health Psychology 2014;19:393–408, http://dx.doi.org/10.1111/bjhp.12048.
[32] Lennerling A, Fehrman-Ekholm I, Nordén G. Nondirected living kidney donation: experiences in a Swedish Transplant Centre. Clinical Transplantation 2008;22:304–8.
[33] Oliver M, Woywodt A, Ahmed A, Saif I. Organ donation, transplantation and religion. Nephrology Dialysis Transplantation 2011;26:437–44, http://dx.doi.org/10.1093/ndt/gfq628.
[34] Alam AA. Public opinion on organ donation in Saudi Arabia. Saudi Journal of Kidney Disease and Transplantation 2007;18:54.
[35] Ghods A. The history of organ donation and transplantation in Iran. Experimental and Clinical Transplantation 2014;12(Suppl. 1):38–41, http://dx.doi.org/10.6002/ect.25Liver.L29.
[36] Sack K. A clash of religion and bioethics complicates organ donation in Israel. In: N Y Times; 2014.
[37] Religion and organ donation. US gov inf organ donation transplant; 2017 [Accessed 8 May 2017] https://organdonor.gov/about/donors/religion.html.
[38] What does my religion say? Organ Donation – Engl; 2017 [Accessed 8 May 2017] https://www.organdonation.nhs.uk/about-donation/what-does-my-religion-say/.
[39] Segev DL, Montgomery RA. Regional and racial disparities in the use of live non-directed kidney donors. American Journal of Transplantation 2008;8:1051–5, http://dx.doi.org/10.1111/j.1600-6143.2008.02192.x.
[40] Cantarovich F. Public opinion and organ donation suggestions for overcoming barriers. Annals of Transplantation 2005;10:22–5.
[41] Cantarovich F. Reducing the organ shortage by education and by fostering a sense of social responsibility. Transplantation Proceedings 2003;35:1153–5, http://dx.doi.org/10.1016/S0041-1345(03)00129-5.
[42] Römer P. Der Grote Donorshow (The Big Donor Show); 2007.
[43] Coppen R, Friele RD, Gevers JKM, Zee J. Donor education campaigns since the introduction of the Dutch organ donation act: increased cohesion between campaigns has paid off. Transplant International 2010;23:1239–46, http://dx.doi.org/10.1111/j.1432-2277.2010.01139.x.
[44] NHS Organ Donation. #ShareTheLove. London; 2016.
[45] Neville S. NHS matches with Tinder to boost awareness of organ donation. In: Financ Times; 2015.
[46] Long Live New York Campaign. LiveOnNY; 2016 http://www.liveonny.org/about-us/long-live-newyork-campaign/.
[47] LiveOnNY. Long Live New York animated short film; 2014.
[48] Ghods AJ, Savaj S. Iranian model of paid and regulated living-unrelated kidney donation. Clinical Journal of the American Society of Nephrology 2006;1:1136–45, http://dx.doi.org/10.2215/CJN.00700206.
[49] Jotkowitz A. Notes on the new Israeli organ donation law-2008. Transplantation Proceedings 2008;40:3297–8, http://dx.doi.org/10.1016/j.transproceed.2008.08.128.
[50] Lavee J, Brock DW. Prioritizing registered donors in organ allocation: an ethical appraisal of the Israeli organ transplant law. Current Opinion in Critical Care 2012;18:707–11, http://dx.doi.org/10.1097/MCC.0b013e328357a2e2.
[51] Ministerie van Volkshuisvesting RO en M. Can I be reimbursed for the cost of living organ donation?; 2015 [Accessed 28 May 2016] https://www.government.nl/topics/organ-tissue-donation/question-and-answer/reimbursed-cost-organ-donation.
[52] Fortney Stark. Stephanie Tubbs Jones Gift of Life Medal Act (U.S.A.); 2008.
[53] New York state gift of life medal of honor. NY State Senate; 2016 [Accessed 9 May 2017] https://www.nysenate.gov/legislation/laws/PBH/4368.
[54] New York Tax Law § 612(c)(38)(A). 2005.
[55] Directory of the regulations of organ transplantation in the Kingdom of Saudi Arabia. Saudi Health Council; 2014.
[56] Garwood P. Dilemma over live-donor transplantation. Bulletin of the World Health Organization 2007;85.
[57] Order of St. John UK Award. Organ Donation – Engl 2017. https://www.organdonation.nhs.uk/about-donation/order-of-st-john-uk-award/. [Accessed 9 May 2017].
[58] Policy for reimbursement of expenses for living kidney donors. NHS blood and transplant; 2012.
[59] Zargooshi J. Iranian kidney donors: motivations and relations with recipients. Journal of Urology 2001;165:386–92, http://dx.doi.org/10.1097/00005392-200102000-00008.
[60] Shimazono Y. The state of the international organ trade: a provisional picture based on integration of available information. Bulletin of the World Health Organization 2007;85:955–62, http://dx.doi.org/10.2471/BLT.06.039370.
[61] Cameron AM, Massie AB, Alexander CE, Stewart B, Montgomery RA, Benavides NR, et al. Social media and organ donor registration: the facebook effect: facebook organ donor initiative. American Journal of Transplantation 2013;13:2059–65, http://dx.doi.org/10.1111/ajt.12312.