

Alvin E. Roth Department of Economics, Stanford University



FEBRUARY 25-27, 2016 • PHOENIX, ARIZONA

Conflict of Interest Disclosure

No conflicts of interest related to the contents of this presentation



AMERICAN SOCIETY OF TRANSPLANTATION CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | © POLICY | © POLITICS

Many kinds of transactions are forbidden

- Buying and selling organs for transplant is against the law almost everywhere (except Iran).
- But making markets illegal doesn't make them vanish



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | POLICY | POLITICS

What explains the almost universal laws against compensating kidney donors?

- What might be involved in modifying such laws (and the practices that have grown up around them)?
- What can we understand about the concerns motivating the laws and how they might be addressed?



Repugnance

- Let's call a transaction *repugnant* if some people want to engage in it, and others don't think they should be allowed to.
- So by this definition, sales of kidneys are widely repugnant.



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | **POLICY** | **POLITICS**

Some important repugnant transactions

- Sex (outside of marriage, incest, homosexuality, pornography, prostitution...)
 – Same-sex marriage
- Servitude: Slavery and serfdom and indentured servitude
- Worship (Inquisitions, expulsions, heresy, religious wars, blasphemy)
- Interest on loans (was repugnant, no longer so much)
- Note that the arrow of time points both ways

Many forbidden transactions have negative externalities

- We may want a more refined definition of repugnant transactions:
- Let's call a transaction *repugnant* if some people want to engage in it, and others don't think they should be allowed to, *even though the others can't detect that the transaction has taken place unless someone tells them*.
 - E.g. same sex marriage...



Cutting Edge of Transplantation 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | © POLICY | © POLITICS

Ancient repugnancies can change fast...

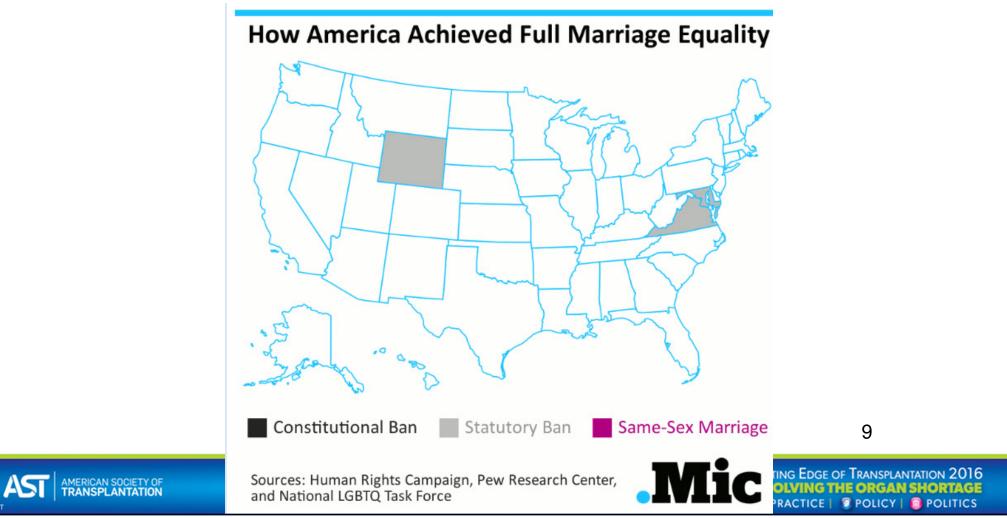
...but may involve a fierce fight



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | © POLICY | © POLITICS

1995

https://twistedsifter.files.wordpress.com/2015/07/the-history-of-same-sex-marriage-in-the-us-in-a-single-gif-1.gif?w=850&h=800



© 2016 AST



© 2016 AST

CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | POLICY | POLITICS

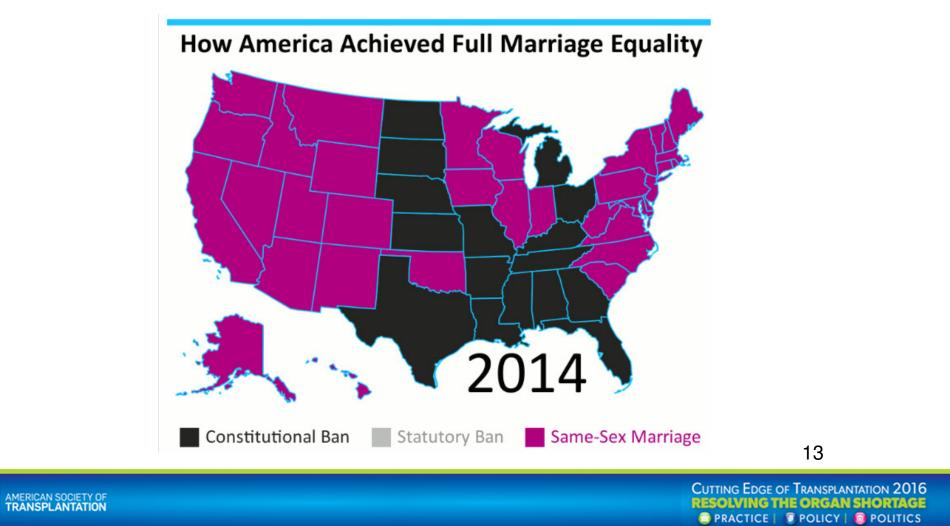




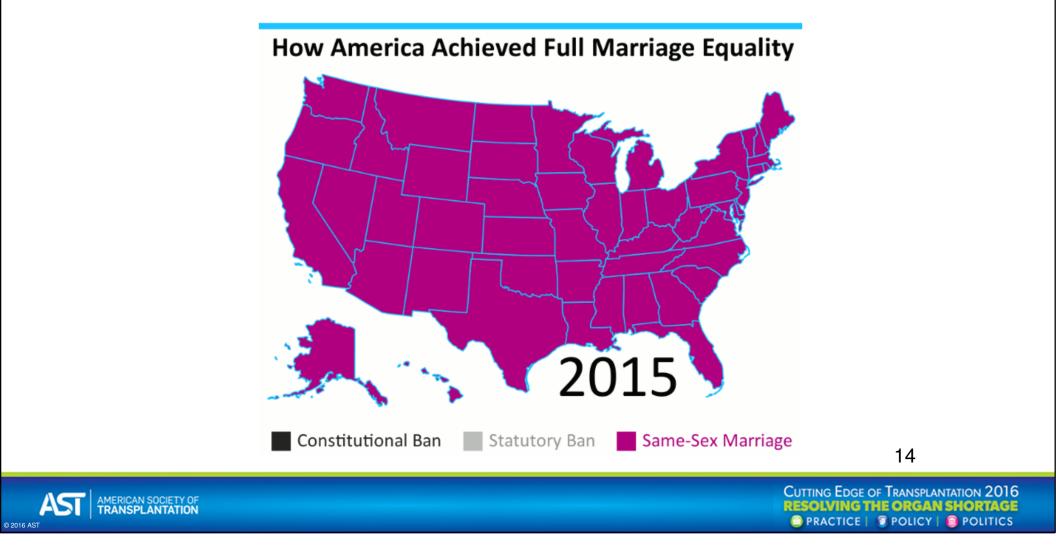
CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | POLICY | POLITICS



AST



AST



Lending money for interest



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | © POLICY | © POLITICS

Credit. Man's Confidence in Man. "Commercial credit is the creation of modern times and belongs in its highest perfection only to the most enlightened and best governed nations. Credit is the vital air of the system of modern commerce. It has done more — a thousand times more — to enrich nations than all the mines of the world." Daniel Webster, March 18, 1834.



AMERICAN SOCIETY OF TRANSPLANTATION

2016 AST

16

TING EDGE OF TRANSPLANTATION 2016 SOLVING THE ORGAN SHORTAGE PRACTICE | © POLICY | © POLITICS

Birth to death



CUTTING EDGE OF TRANSPLANTATION 2016 RESOLVING THE ORGAN SHORTAGE PRACTICE | POLICY | POLITICS

Reproduction

- Adoption
 - Limits on cash payments to mothers
- Surrogate mothers, egg and sperm donation
 Legal to pay surrogates in CA, not in NY
- International "fertility tourism"



Canada: <u>Assisted Human</u> <u>Reproduction Act</u> (2004)

- Payment for surrogacy: 6. (1) No person shall pay consideration to a female person to be a surrogate mother, offer to pay such consideration or advertise that it will be paid.
- Acting as intermediary: (2) No person shall accept consideration for arranging for the services of a surrogate mother, offer to make such an arrangement for consideration or advertise the arranging of such services.
- Surrogate mother minimum age: (4) No person shall counsel or induce a female person to become a surrogate mother, or perform any medical procedure to assist a female person to become a surrogate mother, knowing or having reason to believe that the female person is under 21 years of age.

CUTTING EDGE OF TRANSPLANTATION © 2016 AST

Assisted suicide—'death with dignity'



Supreme Court rules Canadians have right to doctor-assisted suicide

SEAN FINE - JUSTICE WRITER The Globe and Mail Published Friday, Feb. 06, 2015 5:29AM EST Last updated Tuesday, Sep. 22, 2015 2:05PM EDT

452 Comments

256K f 256K Y in 212 G+1 323

Canadian adults in grievous, unending pain have a right to end their life with a doctor's help, the Supreme Court ruled on Friday.

The unanimous ruling, by establishing that the "sanctity of life" also includes the "passage into death," extends constitutional rights into a new realm. The courts have used the 1982 Charter of Rights to establish gay marriage and to strike down a federal abortion law. The new ruling will change the way some Canadians are permitted to die.



AA

Print



AST AMERICAN SOU TRANSPLAN

Money and repugnance

- There seem to be three principal lines of argument about how adding money makes a non-repugnant transaction (like kidney transplantation) repugnant:
 - -Objectification
 - -Coercion ("exploitation")
 - -Slippery Slope



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | POLICY | POLITICS

"Coercion" Can high payments harm recipients?



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | POLICY | POLITICS

Laws and guidelines limit material incentives for many transactions

• Living organ donation

"It shall be unlawful for any person ... to transfer any human organ for valuable consideration for use in human transplantation"

- National Organ Transplantation Act, 1984
- Human participation in scientific experiments
- Surrogate motherhood
- Human egg donation
- ...

Goal is *not* to discourage the transactions

Altruistic participation often applauded

23



MERICAN SOCIETY OF

Cutting Edge of Transplantation 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | © POLICY | © POLITICS

Limiting payments for participating in experiments

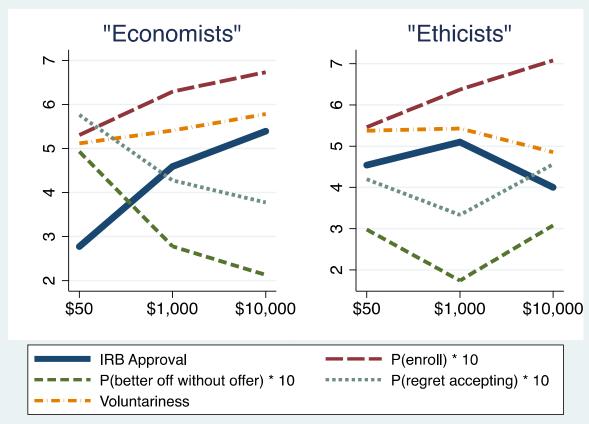
- National Bioethics Advisory Commission (2001), "benefits threaten ... the voluntary nature of the choice, ... raise ... the danger that the potential participant's distributional disadvantage could be exploited [and] ... lead some prospective participants to enroll ... when it might be against their better judgment and when otherwise they would not do so."
- The medical ethics guidelines of jurisdictions as diverse as the European Union, India, and Kenya contain similar language.
- Payment constraints often come into play in experiments in developing countries.

More Money, More Problems? Can High Pay be Coercive and Repugnant? By Sandro Ambuehl, Muriel Niederle and Alvin E. Roth, *American Economic Review*, Papers & Proceedings, 2015

- We presented 1445 subjects on Amazon Mechanical Turk with a hypothetical medical trial that compensates participants with \$50, \$1,000, or \$10,000. The trial was described as a test for sideeffects of a vaccine that requires a total of 40 hours of a participant's time and was characterized as low but non-zero risk.
- We asked our survey participants, as third parties, to evaluate the trial (as hypothetical IRB members).



Third party evaluations, divided into two patterns (covering the majority of respondents)



More Money, More Problems? Can High Pay be Coercive and Repugnant? By Sandro Ambuehl, Muriel Niederle and Alvin E. Roth, *American Economic Review*, Papers & Proceedings, 2015

26



AMERICAN SOCIETY OF TRANSPLANTATION CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | © POLICY | © POLITICS

An Offer You Can't Refuse? Incentives Change How We Think

Sandro Ambuehl Stanford University (Ph.D. this year:)



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | © POLICY | © POLITICS

Opponents of payment bans and limits : Laws prevent mutually beneficial exchanges → impedes efficiency (e.g. Becker & Elias, 2006, Emanuel, 2006, Satel & Cronin, 2015, Radcliffe-Richards et al., 1998)

Proponents: Incentives distort assessment of costs and benefits of participation (Kanbur, 2004, Satz, 2010, Grant, 2011, Sandel 2012)

"payments ... should be ... not so substantial that they ... will lead donors to discount risks"

- American Society for Reproductive Medicine

"benefits ... raise ... the danger that ... some prospective participants enroll ... when it might be against their better judgment and when otherwise they would not do so"

- National Bioethics Advisory Commission, 2001

Evidence Introspection ...



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | © POLICY | © POLITICS

Subjects are presented with a lottery

L	ottery	
	lose \$3.50,	prior probability $\frac{1}{2}$
	lose nothing,	prior probability 1/2

Incentive

- Get \$3 and take the lottery, or don't participate
- Get \$0.50 and take the lottery, or don't participate



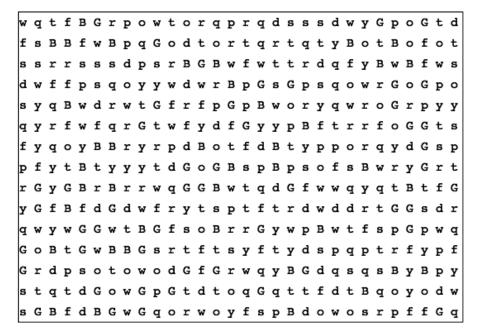
Information

AMERICAN SOCIETY OF TRANSPLANTATION

ASI

© 2016 AST

Examine picture however you like



- If state = good: 50 G, 40 B
- If state = bad: 50 B, 40 G

(Similar to Caplin & Dean, 2014)

30

CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | POLICY | POLITICS

Treatments: 2x2 design

IncentiveInformed of incentiveHigh / lowBefore/after examining state

Control: Prevent skewed information search

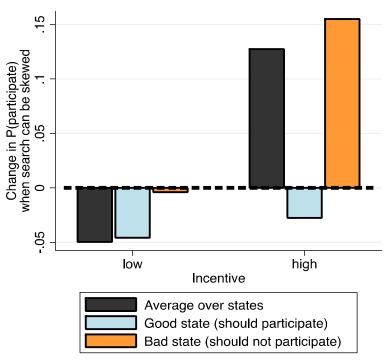
Learn incentive amount only *after* examining picture, but before any decision. (Similar to Babcock & Loewenstein, 2007)

- Cannot skew information search according to incentive
- Other channels can still matter (e.g. optimistic prior for high incentives, Brunnermeier & Parker, 2005)





Change in participation rate if search can be skewed



Average increase for high incentives 11.62%^{**} (s.e. 4.25%). Increase in bad state for high incentives 15.49%^{**} (s.e. 7.50%). Remaining effects are not statistically significant.

 Increase in participation when search can be skewed is almost *entirely* due to increase in false positive rate (additional participation in bad state) 32



Some subjects made objectively worse decisions when faced with "high incentives"

 So, if the benefits of incentives are sufficient to go forward, we will want to have well-designed informed consent protocols to protect the vulnerable



When legislation is widespread...

...we need to understand what motivates it, whether we agree with it and want to defend it, or disagree with it and want to change it.



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | POLICY | POLITICS

Transactions between consenting adults

Test yourself for repugnance:

Are you willing to contemplate carefully regulated, sales of live **kidneys**?

Yes / No



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | POLICY | POLITICS

Transactions between consenting adults

Test yourself for repugnance:

Are you willing to contemplate carefully regulated, sales of live **hearts**?

Yes / No



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | POLICY | POLITICS

Paying for heroism...

Niederle, Muriel and Alvin E. Roth, "Philanthropically Funded Heroism Awards for Kidney Donors?, *Law & Contemporary Problems*, 77:3, forthcoming, 2014.



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | S POLICY | S POLITICS

Survey

- On a scale of 1 (strongly disapprove) to 10 (strongly approve) evaluate the following proposals. (The names in parentheses are for later reference and were not presented to survey participants.)
- (Fed 50K) Federal compensation for American Kidney Heroes by an Act of Congress: Congress will authorize the federal government to recognize all non-directed donors with a ceremony in Washington D.C., a medal and a payment of \$50,000.
- (Fed few) Federal compensation for American Heroes by an Act of Congress: Congress will pass the American Heroes Act which will establish some generally recognized criteria for exceptional heroism, and each year will recognize qualifying American Heroes, who will be celebrated with a ceremony in Washington D.C. and will each receive a medal and a prize of \$50,000. While the kinds of heroism celebrated may vary from year to year, the criteria of the Act will include particularly deserving policemen, firefighters, and non-directed kidney donors. The goal will be to recognize five American Heroes each year. The Act anticipates that a non-directed kidney donor will be honored every year.
- (Found 50K) American Kidney Heroes Foundation, a private non-profit philanthropy: The Foundation will recognize non-directed kidney donors as American Heroes, who will be celebrated with a ceremony in Washington D.C. and will each receive a medal and a monetary prize. The Foundation expects to be able to include all the non-directed kidney donors every year. The Foundation expects to have sufficient funds to make the prize amount \$50,000.
- (Found div) American Kidney Heroes Foundation, a private non-profit philanthropy: The Foundation will recognize non-directed kidney donors as American Heroes, who will be celebrated with a ceremony in Washington D.C. and will each receive a medal and a monetary prize. The Foundation expects to be able to include all the non-directed kidney donors every year. The available prize money will be divided equally among all the recipients.
- (Found few) American Heroes Foundation, a private non-profit philanthropy: The Foundation will establish some generally recognized criteria for exceptional heroism, and each year will recognize qualifying American Heroes, who will be celebrated with a ceremony in Washington D.C. and will each receive a medal and a prize of \$50,000. While the kinds of heroism celebrated may vary from year to year, the Foundation's criteria will include particularly deserving policemen, firefighters, and non-directed kidney donors. The goal will be to recognize five American Heroes each year. The Foundation expects to be able to include a non-directed kidney donor every year.



AMERICAN SOCIETY OF TRANSPLANTATION CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | **?** POLICY | **POLITICS**

Fed 50K has a lower approval rating than any other proposal

	Fed 50K	Fed few	Found 50K	Found div	Found few
Fed 50K	<u>6.48</u>	<0.01	<0.01	<0.01	<0.01
Fed few		7.28	0.35	0.42	0.048
Found 50K			<u>7.37</u>	0.28	0.096
Found div.				7.23	0.029
Found few					7.69

Table 2: Average Approval and significance of differences in mean approvals

For each policy the average approval (underlined) and for each cell above the diagonal the p-value of a two-sided t-test comparing the relevant policies where we have 200 respondents per policy.

The main result that Fed 50K has lower average approval rating than any other proposal is present not only in the mean, but is also reflected when considering extreme answers (such as the percent of participants who strongly disapprove or strongly approve) or moderate answers, see Table 3.



CUTTING EDGE OF TRANSPLANTATION 2016 **RESOLVING THE ORGAN SHORTAGE** PRACTICE | © POLICY | © POLITICS

