Why we should, in fact, pay for egg donation

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In this perspective, I shall argue that women who donate eggs solely for human embryonic stem cell research ought to be compensated. My argument rests on three inter-related principles. First, it is important to recruit the healthiest possible egg donors to minimize the risks of donation. This would relieve pressure to donate on those suffering from diseases that might be treatable with stem cell-based therapies, who are likely to be at greater risk from donation. Second, I believe that it is crucial to be pro-active in building representative stem cell banks, especially in stem cell initiatives paid for, in part, by the public/government. The right of all groups to participate in and benefit from equitable and safe research must be developed for egg donors as for other kinds of research participants. Particular attention should be paid to the opinions and desires of women from historically underserved populations as to how to conduct donations and guide research so as to serve all members of society. Third, reasonable payment would undermine tendencies for domestic and international black and grey egg markets for stem cell research to develop. I then suggest replacing the question of compensation with the question of harm mitigation as the central donor protection issue.

Over the past 2 years, the procurement of women's eggs has emerged as a signature ethical concern for the field of human embryonic stem cell (hESC) research. The most intense debate has focused on how women who donate eggs for research are to be compensated, if at all. Egg donation for stem cell research has been taken up both as a mainstream and as a feminist issue. Egg donation, where eggs from a donor help establish another woman's pregnancy via *in vitro* fertilization (IVF), at least in the USA, is organized and stratified around the properties purportedly transmitted from donors to offspring through the DNA in donated eggs. Not surprisingly, commentators have tended to critique egg donation in IVF for its intertwined eugenic and market excesses. This translates primarily into concern that too much is paid for the eggs of some kinds of donors, rather than concern *per se* about paying egg donors for helping in IVF. By comparison, the eugenic characteristics of donors are of little relevance for hESC research. There is an extremely high level of agreement nationally and internationally that eggs donated for embryonic stem cell research should not be used for reproductive cloning, and in the case of somatic cell nuclear transfer (SCNT), women's eggs are enucleated, removing nuclear DNA altogether. DNA is important in hESC research for therapeutic reasons not reproductive and eugenic reasons, to reduce rejection when transplanted into a patient or to populate a stem cell bank with lines that are a match for a reasonable proportion of the population. In egg donation for stem cell research, it is donor protection that lies at the core of ethical concern regarding oocyte procurement, not out of control markets for some kinds of eggs.

It is, at first glance, surprising that so many parties care about protecting egg donors now that it is part of embryonic stem cell research, given that egg donors have not predominantly been thought of as (potential) victims when donating for IVF. It makes sense, however, if one takes into account the fact that ethical concern about egg donation for stem cell research is first and foremost concern about protecting research subjects, not about reproductive eugenics. In the USA, we should be concerned about protecting egg donors for research in a different way than we are about protecting egg donors for IVF. The former is at least, in part, a public enterprise, while the latter is private; the former seeks cures in the long run while the latter produces (often, but not always) babies that are the direct result of one woman's donation to another. The two kinds of donation should be kept separate even when some eggs are used for IVF and some for research as part of the very same act of donation, as for example when some eggs fail to fertilize in a cycle of IVF and as a result (and

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with appropriate informed consent) are donated to research. The question is, how should egg donors, as research subjects, be considered? How should they be protected, and should they/could they participate in a more active way?

Protection of research subjects has had a powerful history and evolution since World War II. In this period, it has been of paramount importance to protect research subjects from state-sponsored harm. In so far as the public and the government (federal or state) pays for and has an interest in research undertaken, this is a risk that must be guarded against. Furthermore, recent reproductive and genetic technologies have highlighted issues in procurement, provenance and disposition that go beyond anything for which we had previously developed research subject protections. Add to this the fact that egg donation affects only women; given that its risks are gender-specific and thus not evenly distributed across the population, it is especially easy to see why abiding by the precautionary principle and refusing all payment to donors might be considered prudent. Post-Tuskegee, the Belmont Report demanded limits on the risk to research subjects who were unlikely to benefit from the research in question, effectively ending the practice in this country of disproportionately using poor and incarcerated citizens as research guinea pigs. Perhaps a similar paternalism is again called for, as paying egg donors would disproportionately incentivize the poor who would be unlikely to have access to resulting treatments. Perhaps we should demand that only those who are likely to benefit from research should donate eggs for it, and that they donate for no other reason than to advance this science and these treatments. Certainly this would focus our attention on two other crucial aspects of stem cell ethics, namely the fact that only some people are likely to benefit from stem cell-based treatments and that only some of those who would benefit are likely to have access to those treatments. As I discuss below, however, while I understand the move to ban compensation, I believe this is the wrong way to go.

The question of women's egg donation has been discussed in three very distinct frames, with insufficient attention to the significant interconnections among and differences between these frames. These three frames are:

- Egg donation, which has a long ethical history in organ and tissue donation and has a deep intellectual tradition around the theory of the gift;
- Egg selling, which has its roots in liberal understandings of the market, autonomy and the limits of commodification;
- Egg trafficking, which draws on the history of international efforts to end trafficking, especially trafficking in persons, organs and tissue, and draws attention to the links between transnational organized crime, immigration push and pull and procurement.

Egg procurement intersects with each of these frames, without perfectly fitting into any of them. It is essential that we draw on them all to inform the ethical and policy debate.

Although the debate regarding compensation is still very much alive, a provisional consensus has emerged that egg donors for stem cell research ought not to be paid. Many have pointed out the unfairness of excluding only egg donors from among all those contributing to stem cell research from receiving any financial gain. After all, if we really cared about ethics, should we not also ban researchers from benefiting financially to be sure that their science remained untainted by material interest? Underlying the apparent unfairness of the unilateral prohibition of payment to egg donors, there are good reasons that lead individuals and organizations to advocate or legislate against paying women for undergoing procedures in which their eggs are extracted for hESC research. There are also bad reasons not to pay women for this. The time has come to put aside the bad reasons, and then to ask of the remaining good reasons whether or not the intended beneficial effects are, in fact, likely to be achieved by nonpayment. If, as I contend here, the desired effects can actually be better achieved by paying women for their eggs, then we ought to advocate for payment. In jurisdictions such as California, where paying women for donating eggs for stem cell research would require overturning currently existing legislation, an effort should be made to counteract the problems with nonpayment that I address here.

There are at least three inter-related sets of excellent reasons that lead people to advocate against paying egg donors, which i will now discuss.

Risk mitigation

Egg extraction is intrusive and carries known risks up to and including death. Everyone desires to minimize harm to potential egg donors. If women are paid to donate their eggs, they may be inclined to discount the risk. They

may even be encouraged and/or coerced by those with financial responsibility for, or dependency on, them, or by those invested in potential research, to reap the financial award. The problem is commonly referred to as 'undue inducement'. Furthermore, undue inducement to take on risk has a particularly pernicious character: the same monetary amount represents a larger improvement in material circumstances for those who are less affluent to start with.

As an illustration, if a single mother of two in the USA is making US$10,000 a year and gets paid US$5000 to donate her eggs (an amount recommended as appropriate by the Ethics Committee of the American Society for Reproductive Medicine for egg donation for fertility purposes), she increases her income with a single donation by 50% that year. With the extra income, she can buy essentials for her family that are within the range of someone making US$15,000, but not in the range of someone making US$10,000. US$15,000 still falls below the national poverty line for a single mother of two (approximately US$15,500 in 2005, according to the latest figures), therefore the extra things she can afford would be 'necessities', and thus can be assumed to assert a non-optional kind of pull. It is as if the medical risks of donation were set against the nutritional status of her children, for example, and the latter may well include considerably more medical risk. On the other hand, a woman making US$100,000 and being paid US$5000 for a single donation increases her income that year by only 5% and, as both figures are well above the poverty line, the nature of the financial incentive is very different. Thus, based on numbers alone, poor women would be acting rationally if they discounted the medical risks of egg donation in favor of the financial benefit more readily and lower levels of payment than better off women. Another way of referring to this differential is to say that low-income women are disproportionately incentivized.

This risk differential is exacerbated by the fact that those who most benefit from new medical therapies tend to be those who are better off. It is foundational to modern bioethics both that risk should be minimized overall and that risk should not disproportionately be borne by those least likely to gain from the corresponding benefits. Ethically, avoiding subjecting women to risk is thus both a matter of taking women out of harms' way and a matter of equity. Refusing payment to donors is a means to address both of these elements. If there is no financial incentive at all, it follows that no one has a financial incentive to discount their risk, and that the incentive structure does not have a disproportionate effect on poor women, such that low-income women are likely to shoulder much of the risk while getting little of the benefit further down the line.

Informed consent & motivation

A second good reason not to pay donors is to maximize the chances that women who donate eggs for stem cell research really understand the procedure and its implications and that they undertake the donation because they truly desire to help others. A donation that occurred without a donor's knowledge or consent, or one that occurred after a donor had been misinformed, would be undesirable. Similarly, concern to help those who are suffering is a cornerstone of just about every ethical system and has a long history in clinical trails participation and blood and organ donation. There is widespread belief that removing distorting influences on information transmission or donor motivation improves the likelihood of effective informed consent. While there is no such thing as perfect informed consent – neither the relevant information nor a patient's understanding can be known in totality, or rendered sufficiently stable for this ideal – robust informed consent procedures are vital for achieving these ethical ends.

Payment threatens to compromise the 'good' motivation of desiring to help with the taint of the 'bad' motivation of desiring to make money. Payment also potentially introduces an emotional and temporal dynamic – focus on resulting remuneration – into the informed consent environment that potentially undermines the value of the information that is communicated. This mirrors the common criticism of informed consent for medical procedures generally, where informed consent forms are mere steps on the way to getting access to needed treatment, rather than being considered on their own merits. The context of informed consent to egg donation can be expected to be more distorted the more the financial incentive on offer becomes a major motivation. Nonpayment is one way to help ensure that women who donate their eggs understand the procedure and do so because they really want to advance research and/or participate in the search for cures.

Trafficking

A third good reason not to pay women to undergo procedures in which their eggs are extracted is to avoid creating or exacerbating 'trafficking'. Different trajectories or meanings of the word 'trafficking' are at play in debates regarding egg donation. First are ideas coming from trafficking of drugs and contraband. The key ideas taken from this aspect of trafficking are the underlying organized crime that produces, accretes and circulates the objects in question for illegal trade, and the idea of crossing jurisdictional, often national, borders. The need for eggs and the difficulty of attaining them might well lead to the formation of organized crime around egg procurement, especially between parts of the world with different policies on egg donation, setting up a flow of eggs from more to less 'liberal' egg procurement policy regions of the world or within under-regulated regions. Second are connotations of the concept of trafficking that have grown up around debates about trafficking in persons and, more recently, in amendments to policies that include organs and tissue.

The shadow of slavery and other kinds of trafficking in persons reminds us that there are profound moral reasons for international agreement that some kinds of things – women egg donors, but maybe also eggs among them, perhaps – simply should never be treated as commodities. Women's body parts should not, on this view, be treated as natural resources for extraction and sale, or as the raw materials for value-added manufacture. The illegal immigration aspect raises the specter of biological asylum seeking and immigration egg brokers. Will we increasingly see women trafficked across national borders so that their eggs can be extracted? Will consent both to the trafficking and to the egg donation be granted by donors because of the slight hope of asylum offered by the foot in the door of having entered a receiving country? Will organizers of this procurement traffic spring up and, if so, will prohibitive demands be made on donors in exchange for being enabled to travel across national borders? In the face of evidence of substantial reproductive and other medical tourism already taking place, and a well-documented organ and tissue trade, there are ample grounds for concern about egg trafficking. It is possible that payment to donors would merely increase these trafficking pressures. After all, trafficking, whether in a Schedule I drug, an endangered species, a stolen electronic item, a construction or sex worker, a kidney or an egg, thrives because there is a (black) market.

Any argument in favor of paying egg donors should be able to deal with each of these three sets of arguments against paying for egg extraction.

There are also some bad reasons for arguing against compensating egg donors for egg extraction for stem cell research. It is not in the scope of this paper to go into these positions in great depth, but they include at least the following:

- Opposition to paying egg donors as a means of opposing hESC research in general or opposing parts of that research that egg donation would facilitate, such as SCNT work. This may be a sensible political strategy. There are also extremely serious moral reasons that lead people to oppose hESC research in general (e.g., pro-life arguments) or in part (e.g., concerns about inheritable genetic modification). But advocating against paying egg donors because one opposes the research on these grounds is not a good reason against payment *per se*. Of course, the reverse is also true: arguing in favor of paying egg donors simply to support stem cell research or some part thereof is a poor argument in favor of payment.
- Opposition to paying egg donors so as to encourage the investment of resources in one's own preferred branch of stem cell research. Someone might oppose payment to egg donors so as to decrease the supply of human eggs, thereby corroborating the argument that animal ova should be used instead of human ova. As nonhuman eggs are much easier to procure, using enucleated nonhuman eggs in combination with human somatic cell DNA for sSCNT, for example, might greatly facilitate research and speed up results. There are good reasons to perform this research, but wishing to do it is not a good reason to prohibit compensation to women donors. Alternatively, someone might hope to attract more money to human adult stem cell research, and away from hESC research, by pointing out how hard it is to procure sufficient eggs. This latter position is additionally ethically problematic when egg donation is portrayed as encouraging embryo destruction, while adult stem cell research is portrayed as being compatible with pro-life beliefs, given that certain adult stem cells (including clinically promising ones) are sourced from fetuses.

- Opposition to paying egg donors based on a general opposition to invading the body, perhaps especially women's bodies, for raw materials, or a general opposition to the ways in which bodies, especially women's bodies, have historically been used as sources and objects of scientific knowledge. These are extremely important considerations upon which we ought to reflect more than we do. They bear on procurement in general, however, and are mute as to the question of whether donation should be compensated or not.

Taking the good reasons elaborated above, does nonpayment actually achieve the goals in question?

Risk mitigation

After three and a half decades of IVF there are some things that we know about the risks of egg extraction and egg donation. We know that unintended pregnancy is the greatest risk for fertile egg donors and that multiple birth is the greatest risk for the recipient and the children she bears. We know that the risks associated with surgery, anesthesia and ovarian hyperstimulation syndrome (OHSS) are very low in sufficiently high volume, accredited and experienced clinical settings. Successful protocols for averting and treating early symptoms of OHSS exist. We also know that infertile patients having their own eggs extracted for IVF are at greater risk in all categories, except unintended pregnancy, than egg donors, presumably owing to older average age and underlying medical conditions related to the cause or effect of the infertility. Unfortunately, we know less about possible effects of having donated eggs on a donor's subsequent fertility, possible long-term effects of taking the gonadotropins used for oocyte maturation (e.g., in causing reproductive tract cancers) and possible epigenetic effects of *in vitro* embryonic manipulation on IVF-conceived children. We also know nothing, to date, about subsequent psychological effects of donation for stem cell research, which might be predicated on the uses to which stem cell research outcomes are put.

Instead of refusing compensation to women who donate their eggs so as to ensure that their assessment of risk is sufficiently unclouded, why not direct our efforts at understanding and minimizing the risks so that we dramatically reduce what has to be offset? This would remove the need to exclude payment for this reason. An argument in favor of payment can then easily be made: as risks can never be reduced to zero, there will always be a positive term on the risk side of the risk:benefit raito, no matter how small. If the benefit side is zero, the benefits can never equal or outweigh even an infinitesimally small risk. Some benefit – compensation, hope for a loved one, or belief or stake in the science, to name a few – should be assured to all donors.

In this vein, I propose adoption of the following ten key risk mitigation strategies for egg donation. Many of them apply to egg donation for fertility as well as for stem cell research, although there are crucial differences between these two uses of women's eggs and I am specifically addressing eggs donated for stem cell research here. These measures should be adopted, even if payment of donors is not possible:

- Minimize the comorbidity of the donor pool by routine medical screening;
- Minimize the risk of OHSS by reducing the gonadotropin dose for donors. Define a desirable egg yield per donation cycle as less than ten eggs;
- Minimize the risk of OHSS by standardizing monitoring and early intervention protocols from the clinics with the best statistics in this regard;
- Pursue sources of women's ova that do not require the administration of gonadotropins, including 'natural cycle' egg extraction and ovarian tissue biopsy with *in vtiro* oocyte maturation. The latter should be made the focus of a major research project, given its additional potential benefit for preserving the future fertility of cancer patients, the scientific benefits of being able to mature immature oocytes at the time of research within the lab and given the potential numbers of immature oocytes per donation that this would produce. It could include ovarian tissue sourced from aborted female fetuses and cadavers, or removed during pelvic surgery for fertility preservation prior to radiotherapy or at the time of tubal ligation, for example;
- Collect long-term data on future donor fertility, future cancer rates as a function of gonadotropin exposure, effects on children conceived *in vitro* and psychological reactions to hESC research uses and outcomes;
- Minimize the risk of future infertility resulting from donation (whether from scarring or postabortion effects from terminating an

unintended pregnancy, or whatever the causal route) by imposing age and parity restrictions. For example, by restricting donors to women who either assert their desire not to have children or who have at least one living child already and are aged over 25 years;

- Minimize the risk that there might turn out to be a link between gonadotropin exposure and future cancer by restricting the numbers of times it is permissible to donate. Donors should not be allowed to donate more than twice and should not donate at all if they have already gone through egg extraction for their own or someone else's IVF twice or more;
- Minimize the risk of future psychological distress by ensuring ongoing public comment and accountability procedures for stem cell research, and by implementing good tracking, banking and privacy procedures so that revoking of consent is plausible;
- To reduce egg procurement pressure, pursue research on other sources of pluripotent human stem cells, including fetal, spermatogenic, reversed engineered and embryonic stem cell line-derived germ cell sources, as well as IVF eggs that fail to fertilize, IVF 'left-over' and pre-implantation genetic diagnosis-discarded embryos;
- Provide donors with free contraception as well as follow-up medical care for any donation-related adverse outcome, including unintended pregnancy.

Informed consent & motivation

Many researchers, myself included, have noted that egg donors in the infertility industry donate for the financial incentive but also for the altruistic motive of helping another woman to have a child. The two kinds of motivation, far from being incompatible, seem to bolster one another. Women say they are more likely to donate if the cause is good and more likely to donate if they will be compensated for doing so. Most women are far more likely to feel good in the long term about having donated if the cause continues to seem good and the compensation continues to be perceived as having been just. It is wrong then to worry that being paid substitutes a financial for an altruistic motivation. To assure that the informed consent context is not unacceptably distorted, it is sufficient to assure that the amount paid is not excessive nor likely to come to be seen as having been exploitatively low. I return to means of calculating appropriate compensation below. Paying women to donate increases the overall availability of donors, without necessarily compromising motive. Thus, the policy implication of the compatible, indeed additive, nature of financial and altruistic incentives is extremely significant:

If the donor pool is restricted by a lack of financial incentive, pressure to donate will be increased on those who stand to benefit in other ways. The major noncompensated incentives to donate are likely to be felt by those who might themselves benefit from an embryonic stem cell-based therapy, those who have a family member who might so benefit or those who have a future scientific or financial stake in hESC research. There is no reason to think that the kinds of incentives represented by hopes for a cure, by kinship ties, by the promise of scientific progress or credit or by other kinds of financial gain, are any less coercive or less likely to cloud motivation or the context of informed consent. Each kind of incentive should be scrutinized for its coercive or clouding or exploitative capacity.

Decreasing the overall donor pool by withholding compensation risks increasing the pressure on women with debilitating diseases who might be helped by stem cell research to undergo donation procedures. This would lead not only to a decrease in altruistic donation – those donating to help others – but to an increase in the risks of donation. As we know from IVF, those with underlying conditions suffer greater risks from all medical procedures, including donation. Nonpayment encourages those with higher comorbidity to be donors. This is medically and ethically irresponsible. Rather, we should aim to recruit the healthiest possible donor pool so as to minimize the risks of the procedure.

Trafficking

Although my research on this issue is still in progress, a number of provisional conclusions can be drawn. First, a restricted supply of women's eggs worldwide is likely to be a 'push' factor in trafficking. Second, outlawing trade in eggs without removing the research need for eggs is a 'pull' factor for the development of a black market in eggs. Third, having a patchwork of egg-procurement policies worldwide facilitates the trafficking of both women and eggs down retrictiveness-of-egg-donation-policy gradients around the world. The pre-existing high volume of reproductive tourism exacerbates this

by providing a ready-made set of egg extraction networks that can easily be exploited for egg extraction for stem cell research.

Three recommendations flow from these provisional recommendations:

- Donors should be legally paid, so as to avoid the creation of a black market;
- Concerted efforts should be undertaken by an international body, perhaps the International Society for Stem Cell Research together with the UN or the International Labor Organization, to put in place binding standardized and harmonized egg procurement and compensation policies with a robust certification process for donor provenance and payment;
- Compensation should be restricted to payment for the work of undergoing the donation procedure, so as to avoid commercializing that which should not be commercialized.

To avoid undue financial incentive and to recruit donors from all sectors of the population, compensation should be capped at a level that could be earned by other kinds of physically demanding service work for which there are already pay scales within the sector in question. For example, if a hESC facility is government funded, it should pay egg donors for the total hours during which they are working according to already established temporary civil service pay scales. By assuring that payment is a salary negotiation between the state agency (or the relevant employer) and the donor, rather than a payment for the eggs, it appropriately distinguishes egg donation for stem cell research from the kinds of unregulated eugenic gamete markets in the fertility industry.

Executive summary

- Women who donate eggs solely for human embryonic stem cell research ought to be compensated.
- It is important to recruit the healthiest possible egg donors to minimize the risks of donation.
- It is crucial to be pro-active in building representative stem cell banks, especially in stem cell initiatives paid for in part by the public/government.
- Payment would undermine tendencies for domestic and international black and grey egg markets for stem cell research to develop.
- The question of compensation should be replaced with the question of harm mitigation as the central donor protection issue.

Conclusions

In conclusion, I have tried to show that, contrary to initial appearances, it is extremely important that we compensate egg donors as a means of minimizing risks to donors, encouraging donations for the right reasons and under the best conditions of informed consent, building representative stem cell banks and preventing trafficking in eggs. Payment alone however, is not enough. It is part of a cluster of policy steps that need to be taken together. Jurisdictions whose hands are currently tied by legal prohibitions on paying donors should nonetheless work toward the implementation of as many of the other recommendations (or similar ones) as possible. In California, where I live and work, we run a genuine risk that sick or disabled people who might be helped by stem cell research will donate eggs to increase our supply, even though their risk factors due to comorbidity are higher than the ambient population, just because there is no incentive whatsoever for others to donate to help them. This is the deep irony of so-called altruistic donation – women who should not have to donate because of their risk status will donate when someone healthier would have been happy to be a donor given sensible and dignified recognition of their work, time and effort.