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9 Balancing ethical criteria for the recruitment of gamete donors

Guido Pennings, Effy Vayena and Kamal Ahuja

Introduction

Patients and clinics are constantly searching for donors. The increasing gap between supply and demand in most countries shows beyond doubt that the current systems are unable to attract a sufficient number of donors. The first suggestion for a solution is always the same: let's pay. However, payment for body material is, at least in Europe, generally rejected on ethical grounds. Several alternative modes of compensation are currently applied. Still, the efforts made by clinics and/or governments to increase the donor pool are fairly limited. In order to curb commercialization, a number of countries do not allow clinics to take their own initiatives to attract donors. This entails that the task lies completely with the government. However, compared to the campaigns for blood and organs, governments show very little interest in organizing widespread awareness campaigns for gamete donation. Moreover, the rare campaigns that are set up are so little advertised that they might as well not be done. Only seldom are special organizations (such as the National Gamete Donation Trust in the UK) set up to alleviate the shortage of gamete donors. The most likely explanation for this reticence is that most governments and responsible institutions are not convinced of the moral status of the procedure and as a consequence do not want to associate themselves with this topic.

The practice of gamete donation is a complex system in which multiple ethical rules, legal restrictions and medical facts intermingle. Things are further complicated by the fact that there are many different types of donors. The different categories are based on dimensions with ethical, social and psychological consequences: gamete type (oocyte and sperm donors), anonymity (known, identifiable and anonymous donors) and remuneration (volunteer, commercial and patient donors) (Purewal and van den Akker, 2009). Given space restrictions, we will focus on the major findings and trends.

Anonymity

In the last decade, several European countries have adopted legislation to impose gamete donor identifiability (Blyth and Frith, 2009). Many people in countries where identifiability is the legal rule blame the abolishment of anonymity for the current shortage of gamete donors. Anonymity as a rule plays a different role in donor recruitment than payment: it does not attract donors but facilitates their recruitment. Many practitioners believe that the abundance of sperm donors in Denmark and egg donors in Spain is only possible because of the anonymity there. In countries where anonymity was abandoned (e.g. Sweden, the United Kingdom, the Netherlands), there has been a sharp drop in the number of donors (at least initially). It would have been surprising if this had not been the case. A certain type of donor is recruited through the rules, mainly regarding payment and anonymity. When these rules change, the donor population will also change (Pennings, 2005a). It was perfectly predictable that when existing donors were asked whether they would still donate if the anonymity rule were abandoned, the majority (but notably less in Australia and New Zealand) said they would cease to donate (Daniels, 2007). A new rule means that a new population should be addressed in the campaigns so that new donors who agree with these rules can be attracted.

Many people have a rather simplistic view of the gamete donation practice. They believe that one can alter one rule and leave the rest as they are. The rules, however, can best be compared with Mikado pick-up sticks: peripheral rules can be changed relatively easily, but central rules, such as anonymity and payment, will almost inevitably bring about and require other additional changes (Pennings, 2010). So, in summary, the abolishment of anonymity has had the expected negative effect on the number of donors in the countries that originally respected anonymity. But newly adapted (and most likely expensive) campaigns are able to regain the same level of donation that existed during the pre-identifiability period, as was demonstrated in the UK (Blyth and Frith, 2008; Pacey, 2010). Still, reaching the pre-identifiability level may not be sufficient to cover the demand since a peripheral rule connected to the altered anonymity rule may have a highly limiting effect on the use of the donor gametes. This peripheral rule is the possibility for the donor to set upper limits on the number of children born from their donation, an option that does not exist in systems that work with anonymous donors.

Anonymity in essence regulates the interaction between donor and recipients. Its most important consequence is that it closes the

relationship completely: after the donation, no party can contact another party. This is an aspect that can be very highly appreciated both by the donor and by the recipients. Anonymity prevents all kinds of possible complications and conflicts regarding rights, duties and so on in the future. If this closure is a precondition for a candidate donor to donate, then abolishing this rule will reduce the number of donors. This cannot be the end of the argument, though, since donors may request all kinds of things. Society's attitude towards donation of body material is not solely focused on attracting the highest number of donors: society wants to recruit the highest number of donors while respecting a number of ethical rules. Every rule excludes a number of donors but that in itself is not a sufficient reason to abandon the rule. A country that believes that a child has a right to know its genetic origin, cannot reintroduce anonymity. Countries such as France that put more emphasis on social parenthood can, on the contrary, impose anonymity. Given the fact that both sides in the debate have strong arguments for their position, it seems reasonable for governments not to take sides and allow the participants to decide how they want to organize their family and what kind of relationship they want with the other persons involved. This can be done by adopting a 'double track' system (Pennings, 1997). In this system, both the donor and the recipients decide whether they want to be identifiable or anonymous. Beside the fact that this is a liberal structure that allows competent participants to decide for themselves, it does not exclude potential donors and thus promotes recruitment. In Belgium, for instance, the general rule is anonymity, but this rule can be broken when both donor and recipient(s) agree to be known to each other. Research has shown that, when given the choice, the decision on known or anonymous donation is a matter of negotiation between the parties and depends on aspects such as a genetic link with the donor and the importance of knowing the donor as a person. At the same time, both donor and recipients may feel uncomfortable with the close presence of the other (and all the possible complication this entails) and opt for the anonymous exchange (Baetens *et al.*, 2000). The double track policy represents the best attempt to balance the rights of donors and recipients. The decision about the best interests of the offspring is, like in many other instances, left to the future parents.

Payment

The question of payment for body material has been around for decades (Titmuss, 1970). Whether gamete donors should receive financial

remuneration for their donation still is a major controversy in medically assisted reproduction. In the general perception, *to donate* means *to give a gift*. A great part of the controversy stems from the different views of what the 'gift' is and whether it remains a 'gift' even if a price tag is attached to it. An interesting twist in the debate is the role that remuneration can or should play in recruiting donors. Some data have shown a decrease in the number of donors when payment ceases (Anonymous, 2010). The evidence from countries (like France) that forbid all payment clearly shows, however, that people still come forward to donate even if no remuneration is offered (Guerin, 1998). Other studies have concluded that a recruitment strategy that targets the right kind of donor can successfully bypass the compensation issue (Daniels *et al.*, 2006). The core questions are whether gamete donation should be a purely altruistic act and to what extent or under what conditions financial compensation is morally acceptable. Lack of consensus on whether a donor should receive any money at all and, if yes, what this should be for (i.e. payment for a service, compensation for lost earnings or simply minimal reimbursement of costs incurred by the donor through the act of donation such as travel costs to the donation site, etc.) is evident in the variety of laws and guidelines. The differences in practice are vast. In the USA donor payment is not regulated and clinics operate on a free market model. Egg donors in particular may receive huge amounts of money. A recent study of recruitment advertisements for oocyte donors in US college newspapers reported fees up to US\$50,000 (Levine, 2010).

The American Society for Reproductive Medicine's (ASRM) guidelines on the issue of oocyte donation recommend financial compensation but propose that up to US\$5,000 is a reasonable compensation and set a maximum upper limit of US\$10,000 (Ethics Committee of the American Society for Reproductive Medicine, 2007). This sum is based on a calculation of estimated hours spent for oocyte donation multiplied by US\$60–70 which is the hourly compensation for sperm donation. A survey of American clinics in 2007 showed that the average payment for oocyte donors (in clinics which are members of the Society for Assisted Reproductive Technology) did not exceed US\$5,000. Semen donors are also compensated, but in most places payment is based on sample acceptability (quality and sperm count) and the amount varies between US\$50 and US\$100 (Almeling, 2007). The situation is distinctly different in neighbouring Canada, which forbids payment to gamete donors according to legislation passed in 2004. The law allows reimbursement of expenses for receipted expenditures, which includes for sperm donors travel expenses (such as transportation, meals and

accommodation), child care costs (for attending clinic appointment), counselling services, health care services (provided and prescribed by health care providers); compensation for egg donors includes all the above and, in addition, the costs for medication.

In Europe the situation is highly variable. In contrast to the ASRM, the professional organization of European fertility specialists, the European Society for Human Reproduction and Embryology (ESHRE) views the 'direct payment for reproductive material as unethical'. It does, however, accept 'reasonable compensation for the effort of the donor' (ESHRE Task Force on Ethics and Law, 2002). A survey of European states conducted by the EU's Health and Consumer Protection Directorate General found that most states regulate non-remuneration by law in the context of preventing organ trading and trafficking as dictated by the EU Tissues and Cells Directive 2004/23/EC. However, even within these states, some allow reimbursement of expenses and others of inconveniences. The remaining states have no regulation or operate on non-binding national and international guidelines (EU Health and Consumer Protection, Directorate General, 2006). Specific amounts of payment are not commonly mentioned in the guidelines and most tend to use vague language. Nevertheless, there is general acceptance that costs incurred due to donation (i.e. travel costs and medication) should be reimbursed. However, there exists considerable disagreement on whether people should be paid for the risk they take, the inconvenience they experience and the service they provide.

These different approaches and practices have been justified by the use of arguments based either on moral principles or pragmatism and they evolve around the issue of protection of the donor, the offspring or society as a whole. In the following sections we summarize the arguments for and against payment of gamete donors.

Donors should not be paid

Article 21 of the Council of Europe's Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine (1997) clearly states that 'the human body and its parts as such should not give rise to financial gain'. This is a widely accepted position and the same point appears in other regulatory documents and guidelines (Nuffield Council, 1995; Directive 2004/23/EC). The rejection of payment is based on the argument that the body and its parts should not be treated as commodities because this denies their dignity and sacred worth (Holland, 2001). Moreover, gametes with the

potential to become embryos and possibly persons come even closer to the notion of selling and buying humans. The 'human dignity' argument is particularly appealing to regulators and it is widely used in ethical debates about regulating biomedicine and biotechnology (Caulfield and Brownsword, 2006). However, it remains a vague argument because there is no clear definition of human dignity and it is therefore hard to show which aspects of dignity are violated in the case of paid donors.

The argument goes on to raise the concern of exploitation. If a monetary gain can be made, people in financial need will be more tempted to sell their gametes. Depending on the price they are offered, those individuals may end up underestimating the physical and psychological risks of gamete donation (Steinbock, 2004). This argument is stronger in the case of oocyte donation as the risks associated with ovarian stimulation and oocyte retrieval are much higher than for semen donation. Financially disadvantaged individuals, such as young women, are more vulnerable and therefore more at risk of exploitation. Vulnerability, however, is a complex concept and it is difficult to define precisely all its nuances. Is an athletic, beautiful, Ivy League university student with very high SAT scores a vulnerable individual when she is offered over US\$35,000 for her oocytes? Is a young, beautiful, educated Indian woman vulnerable if she is offered US\$1,000 for her oocytes? It could be argued that when there is financial remuneration, the risk of exploitation increases. Whether there actually is exploitation can be determined on a case-by-case basis. Still, prohibition of payment is a relatively easy way to protect vulnerable individuals (Rao, 2006).

Payment, especially when the amount is high, may also jeopardize informed consent, which is frequently seen as a safeguard against exploitation (Nuffield Council on Bioethics, 1995). The donor in need may underestimate the risks of donation and, if operating under undue inducement, the consent is not free and voluntary as it ought to be.

Beyond the arguments that address the need to protect donors, a second set of arguments focuses on the welfare of the child. One pragmatic argument against payment raises the concern that prospective donors who donate just for money might not disclose important information about their medical history and might put potential offspring at risk (Yee, 2009). Psychological issues or abusive behaviour have been quoted as examples (Schover *et al.*, 1992). However, standard medical and psychological screening of donors would normally suffice to avoid this problem. Another argument in this context states that children who find out that they were conceived as a result of a financial transaction might be psychologically adversely affected (Johnson, 1997). There is limited evidence to support or refute this argument but there

is evidence suggesting that, in case of disclosure to the offspring, the 'gift nature' of the donation is important (Thorn, 2007).

A broader argument against payment is that it may exacerbate inequities. Those who can afford to pay for gametes will be more likely to receive treatment and to have children. This point is linked to a eugenics argument. In a free market for gametes, human traits and characteristics will be valued selectively. The price will not be compensation for the risk or the inconvenience of the donor but for the trait itself (i.e. being blond, tall or athletic) (Schonfeld, 2003). Furthermore, if people can pay more for certain genetic traits, well-off couples will be able to buy 'better' eggs and sperm, while poorer couples will be unable to select and will be consigned to fate. This argument has been fuelled by the payments that have been made for specific traits to egg donors in the USA. However, this argument does not hold for European countries where a maximum limit is imposed on the amount that can be offered to the donor. As a consequence, many poor, uneducated women present themselves as candidate donors. Moreover, most European clinics do not allow the recipients to choose their donor.

The altruism argument is further extended to the societal level. The Nuffield Council report argues for the need to encourage the 'altruistic culture' in our societies. If individuals with purely altruistic motives can be recruited for donation through recruitment strategies, there will be less need for commercial donors (Nuffield Council on Bioethics, 1995). Gamete donation should not be perceived as business. On the contrary, it should be an act of altruism within a culture that rewards altruism. This raises an interesting point that is rarely discussed, namely the amount of money that the clinic should be allowed to ask from the recipients of the donor gametes. According to the non-commercialization rule, the clinic should not charge more than the expenses they made to recruit the donors and to obtain and store the gametes. There is surprisingly little interest from regulators in this point. Furthermore, there is also the issue of how fertility treatment and reproductive medicine is perceived by the broader public. The argument here points to the 'bad image' if such services are perceived to be just big business. This reputation would erode public trust in science and medicine.

Donors should be paid

People who argue for payment of gamete donors do not necessarily argue in favour of a free market approach. On the contrary, even the proponents of payment heavily criticize the phenomena observed in the USA with special egg donors receiving large sums of money for

their donations (Levine, 2010). Most people arguing in favour of paying donors call for reasonable amounts. The difficulty, however, is to determine what constitutes 'reasonable' payment and how this should be calculated.

The main argument for payment is fairness. Donors should be compensated for the risk they take, the burden of the procedures, the inconvenience, the discomfort they experience and the time they spend for the donation. This also happens for other services in our societies (Macklin, 1996). In fact, a parallel has been drawn between gamete donors and clinical trial volunteers. Payment to health volunteers in clinical trials for the temporary donation of their bodies to medical research is widely accepted (although the prices vary dramatically). If people are compensated for taking a risk and bearing the burden in that case, why not for donating their gametes? Paying reasonable fees for the service of donation would also prevent unfair differences in the compensation, such as the ones observed today where donors with certain traits end up receiving more money. The money will be paid for the service and not for the product. The American Society for Reproductive Medicine guidelines for compensation of egg donors explicitly state that 'compensation should not vary according to the planned use of the oocytes (e.g. research or clinical care), the number or quality of oocytes retrieved, the outcome of prior donation cycles, or the donor's ethnic or other personal characteristics' (Ethics Committee of the American Society for Reproductive Medicine, 2007).

Another popular and pragmatic argument for payment relates to the impact of payment on recruitment. There is a shortage of gamete donors worldwide and financial incentives will most likely increase the number of donors. Conversely, lack of financial incentives will discourage donors. Several studies have been undertaken to establish what motivates people to donate gametes and consequently what the best strategies to recruit them should look like. While it is not easy to draw a clear conclusion (even systematic reviews of such studies cite serious limitations), it is evident that there is a wide spectrum of motives (Purewal and van den Akker, 2009). Gamete donors are donating for purely altruistic reasons, for altruistic and financial or just financial reasons. Undoubtedly, financial incentives are important. Some recent studies from Canada where payment for gamete donation has been abolished pointed to a dramatic reduction in sperm donation. Of the forty sperm banks that existed in Canada, only one is still in operation (Anonymous, 2010).

In the broader context of payment for donation, an alternative approach has been proposed: the so-called 'all inclusive' model (Craft

and Thornhill, 2005). In this model, payment for specific expenses, inconvenience and so on is replaced by a predetermined sum of money that covers everything. As a consequence, payment is legitimate but mixed with expenses. No exact figure is proposed and obviously, if such a model were to be adopted, it would have to be calculated based on local indexes. In theory, this transparent arrangement will deter illegal transactions and exploitation. In addition, it will reduce the administrative load that clinics face when processing receipts for reimbursement of expenses. If the sum is reasonable (to avoid the concerns raised earlier about undue inducement), this presents a middle ground approach (Pennings, 2005a).

Summarizing the different practices and arguments for and against donor payment, three major models emerge: the market model (unlimited sums paid to donors) based on the rule of supply and demand; the reimbursement model (reimbursement of expenses incurred by the donor) based on the belief that altruism is the only morally acceptable motive for donation; and the reimbursement/compensation model (reimbursement of expenses and compensation but too low to constitute undue inducement) based on the idea that services are compensated for and that it is fair for gamete donors to be compensated as well. In the discussion on payment of healthy volunteers for clinical trials, Dickert and Grady discussed three very similar models: the market model (unlimited payment), the reimbursement model (only expenses paid) and the 'wage model'. The wage model is based on the notion that clinical research requires little skill but time, effort and inconvenience. Therefore, research subjects should be paid hourly wages similar to those for unskilled labour (Dickert and Grady, 1999). They rightly argued that with the wage approach, the risk of undue inducement is significantly reduced, as subjects would have alternative options for the same financial gain; the principle of fairness would not be violated as similar people would be treated similarly; and standardization among clinical research centres in terms of subject payment could be achieved.

In our view, a compensation scheme based on the 'wage model' for clinical trial subjects can be applied to gamete donors. Such an approach would address the major concern of undue inducement since the gain cannot be that high and donors must have preferred to donate rather than to do something else for the same money. It would also address the concern of unfairness since donors would receive something for the service they provide and would avoid the issue of valuing certain genetic traits more than others. Finally, donors would not be compensated

for the gametes themselves (seen as a commodity) but for the time they spend and the inconveniences they encounter.

Egg-sharing

Egg sharers are fertility patients who have been diagnosed as subfertile and who are considering IVF. The concept of egg-sharing was first raised in the UK in 1992 by three women patients from the north-east of England who proposed sharing their oocytes with women looking for treatment with donor eggs. Against a national background of too few egg donors and a more local background of too few funds for any further treatment, they asked if they could exchange their eggs in return for another cycle of IVF treatment. The Human Fertilisation and Embryology Authority (HFEA) reviewed the concept extensively and, after many debates and public consultations, in 2000 incorporated egg-sharing into the Code of Practice.

The ethical claims of egg-sharing have been the subject of a long and exhaustive debate over the past twenty years. The detractors argued that subsidized treatment is remuneration in all but name, that treatment outcome favours the recipient (who pays) and that the sharer is giving up half of her eggs before she has even become pregnant (thereby reducing her chances). The first concerns arose from an interpretation of the 1990 Human Fertilisation and Embryology Act and its accompanying Code of Practice for fertility clinics, which specifically declared 'that no money or other benefit shall be given or received in respect of any supply of gametes or embryos'. The authorities and other clinics were concerned that subsidized IVF treatment in return for donating a random portion of eggs could be seen as 'payment'. However, subsequent studies of the motivation of egg sharers indicate that financial reward is not their main incentive; a survey found egg sharers in the UK to be 'well informed women who carefully consider the issues involved' (Ahuja *et al.*, 1998) and disapproved of cash rewards. They were also well educated, middle class and, as judged by their moving accounts and goodwill messages to the future children of their recipients, totally committed to the underlying theme of mutual help (Ahuja *et al.*, 1998). However, despite such repeated findings, the controversies were not resolved until 2004 when a review for the HFEA concluded that egg-sharing was morally acceptable (Human Fertilisation and Embryology Authority, 2005).

The main problem with egg-sharing as an intermediate system is that it falls between two paradigms: altruistic donation and commercial

transaction. One has to decide, through analogical reasoning, whether the intermediate positions (reimbursement, payment in kind etc.) link best with one rather than the other paradigm. The underlying idea is that once we have decided this point, we know whether or not it is acceptable. We are confronted with the conviction that the donation of body material is only acceptable if it is purely altruistically motivated. The argument against payment has overshot itself and has been extended to any kind of benefit that the donor might receive. Any benefit is sufficient to disqualify the system. However, it is one thing to ban payment to prevent commodification of the human body. It is quite another to forbid other types of benefits that do not have this effect. Two counterarguments are worth mentioning here. First, to forbid any benefit is a very strict position. One could adopt the alternative position that an act is morally praiseworthy to the extent that it is motivated by the need of the other(s). The latter would fit better with the empirical fact that most (if not all) actions are done for more than one reason. Second, some people seem to mix up moral praiseworthiness and moral acceptability. These are different standards and, from a moral point of view, it is more important to be able to decide acceptability. Our starting point is that benefits can be offered (i.e. it is morally acceptable) as incentives for people to donate as long as these incentives do not lead to the commercialization and commodification of the human body.

It is this pragmatic altruism that defines the place of egg-sharing in ART today, for the simple fact is that egg-sharing simultaneously solves the principal problems of the sharer and the recipient: the former receives the IVF treatment she needs but cannot afford and the latter obtains the eggs which she can no longer produce. Many patients perceive the system as a win-win procedure (Blyth, 2004). Moreover, neither has a treatment which she otherwise need not have had. The risks – such as ovarian hyperstimulation – are still there, of course. But now there is a difference in the relativity of those risks because the donor is also a patient, and not merely a donor. The former has a vested interest in the treatment that goes beyond pure altruism but, as the studies have found, egg sharers do not perceive it to be blatant commercialism. Finally, the benefits are conferred equally between the recipient and the donor: both parties have an almost equally high chance of a successful pregnancy (Ahuja and Simons, 2005). Other studies also confirmed that egg-sharing does not reduce the chance of success of either party (Thum *et al.*, 2003).

According to one group, egg-sharing in exchange for a free cycle (or part of a cycle) of IVF is a compensation that far surpasses the amount allowed for other donors. The other group argues that a treatment cycle

should not be considered as payment and thus should not be compared with the other types of compensation. The question is whether the free cycle should be recalculated in a monetary amount. Depending on the country and clinic, the amount can be several thousand euro. This is a considerable sum of money that may, according to the chairman of the British Medical Association Ethics Committee, 'constitute an inducement that may jeopardize the validity of the woman's informed consent' (Anonymous, 2005). However, the question whether something is undue inducement or whether it is payment is not the same. Even if we agree that there is a certain degree of inducement, that does not mean that it is payment. This is important because payment has other reprehensible aspects beside undue inducement such as exploitation and commodification.

There are indications that some egg sharers are reluctant to do so but that they go ahead because of their desire to have a child (Rapport, 2003). The prediction has been made that if these women could obtain their treatment without offering their oocytes, egg-sharing would be less attractive for them (Blyth, 2004). Corroborating evidence for this statement was provided by a legal experiment in Belgium. In July 2003 Belgium started to provide full reimbursement for six IVF cycles. Since that date, the number of egg sharers dropped by approximately 70 per cent (Pennings and Devroey, 2006). The conclusion that can be drawn from this reaction is that these women were mainly motivated by the cost reduction. It does not show that altruism was not part of at least some of these women's motives. The studies on the motivations of egg sharers show that they have multiple reasons for sharing. The sharp decline in egg sharers nevertheless shows that a number of these women do not part with their eggs fully voluntarily. Some might consider this to be a sufficient reason to forbid the practice. However, this is too easy an answer. When the broader picture is taken into account, one should realize that even the women who feel strong pressure are not helped or protected by forbidding the practice. The ideal solution would be to prevent a situation where people in need of infertility treatment have to donate their oocytes to receive treatment. This can be done by reducing the out-of-pocket costs of the treatment for the patients either through health insurance or through direct cost reduction.

Reciprocity

The scarcity of donor gametes stimulates the discussion on acceptable systems of recruitment. Other fields equally confronted with a shortage of donor material, such as blood and organs, may serve as an inspiration.

In fact, there already exists a large variety of systems within the practice of oocyte donation, mainly the result of attempts to alleviate the shortage. Fundamental rules like anonymity were reconsidered and in some systems abandoned because of the shortage. Direct donation, where the recipient knows the donor and vice versa, is an option both for gametes and organs. For oocytes (and organs) cross-donation is applied: a donor recruited by recipient X donates to recipient Y and vice versa. In France this system is called 'personalised anonymity' since it allows the protection of the donor's anonymity. Such systems are important because they reveal morally relevant deviations from the ideal 'pure altruism'. Cross-donation, for instance, introduces an element of exchange (i.e. something is asked in return): donor A gives to a certain recipient B in exchange for an equivalent gift by donor B recruited by recipient A. A new variant of this system has been called 'mirror exchange' and was originally invented and applied in the fertility clinic Stichting Geertgen in the Netherlands (Pennings, 2005b). Very simply put, the partner of the person who needs gametes donates in exchange for the gametes of the opposite sex. The man of a woman who needs oocytes donates sperm in exchange for the oocytes donated by the woman of a man who needs sperm. This scheme is then broadened so that the donated gametes are directed into an oocyte and sperm pool and allocated to candidate recipients on the waiting list. For practical and moral reasons, this 'indirect' system is preferable. Persons who donate are awarded bonus points that are attributed to their partners, who then move up on the waiting list. This system, like cross-donation, holds a quid pro quo element that conflicts with the idea of pure altruism. More importantly, the system is based on the principle of fairness. According to this principle, a person is obligated to contribute his or her fair share of the costs if he or she has voluntarily accepted the benefits conferred by the cooperative scheme (Simmons, 1979). In other words, a person who accepts donor gametes as part of his or her parental project as a couple, should, if he or she fulfils the medical and genetic conditions, also contribute to the system from which he or she benefits. Moreover, the system is also open to single women and lesbian couples since it does not matter who reciprocates; it can be the person who benefits herself or her female partner. However, this system cannot rely exclusively on the principle of reciprocity. Some partners will be rejected as donors because of medical and/or genetic contraindications. This will be the case, for instance, for older women. Non-contributors should, on the basis of the bonus points they receive for waiting time, medical urgency and so on, still have the possibility to receive gametes, but they may have to wait longer than those who contribute.

The mirror exchange system has a considerable number of advantages: more donors will be recruited; the benefit for the donor (less waiting time) is strictly non-commercial; the female donor is also a patient and thus undergoes the medical risks for the stimulation in part for her own benefit (like egg sharers); contributors can make good their obligation to reciprocate; the system is compatible with the identifiability of donors; infertile couples are easier to motivate; and, finally, people who need donor gametes for their own family-building are best informed about and prepared for the psychological, social and ethical ramifications involved in gamete donation (Pennings, 2007).

Most people have to get used to the underlying idea, despite the fact that reciprocity as a rule of justice is universally accepted. Three major counterarguments can be distinguished. First, there exists the chance that the recipient becomes pregnant while the donor does not, which may lead to psychological problems. Besides the fact that in most countries it is unlikely that the donor will ever know about the outcome of the treatment of the recipients, the system can easily be adapted to accommodate this objection by allowing people who find it difficult to live with this possibility to postpone their donation. This can be done by allowing them to come back only after their own pregnancy. The second argument focuses on the voluntariness of the donation. Just as for the question of altruism, one should avoid an almost absolute interpretation of the ethical criteria. Every type of reward, benefit or incentive can be interpreted as a kind of threat to voluntariness. Still, offering a reduction in waiting time can hardly be considered as 'an offer one cannot refuse'. This danger might be an additional reason for not imposing strict reciprocity (where only people who donate have access to the waiting list). However, while voluntariness refers to the donors being free from coercion, there is one form of coercion that cannot be avoided here: the fact that recipients of gametes have a moral obligation to donate. If they benefit from the system, they are morally obliged to reciprocate.

The final problem with the exchange is the asymmetry between oocyte and sperm donation. However, whether or not there is an imbalance depends on the criteria with which one measures. Although the medical efforts and risks differ between the two types of gamete donation, the psychosocial aspects are comparable. Moreover, both donors (as a couple) receive what they need in order to build a family. Again, the solution may be found in an adaptation of the procedure. The imbalance can be reduced by introducing a form of egg-sharing: the woman who donates her eggs receives a free IVF cycle instead of an intrauterine insemination with donor sperm. This reduces the waiting time (the

treatment coincides with the donation) and increases her chances of success. More elaborate adaptations can be introduced if considered necessary.

Although the system was presented almost five years ago, there is very little enthusiasm for it. Only the Working Party on Sperm Donation Services in the UK has recommended that 'research on sperm sharing schemes should be facilitated to permit further evaluation of this option' (British Fertility Society, 2008). Many people seem to prefer the violation of the payment rule rather than a system that abides by a fundamental rule of justice. Moreover, there is evidence that the system works. In an Italian clinic, 80 per cent of the women whose partner needed donor sperm accepted sharing their oocytes. In 2001 this clinic introduced a system which guaranteed women who needed donor eggs that they would receive them within 8 months (without donation the mean waiting time was 2 years) if their male partner donated sperm. Approximately 60 per cent of the men accepted, and in one year they recruited 30 new semen donors from the sample of partners (Ferraretti *et al.*, 2006). The data from Stichting Geertgen in the Netherlands indicate that, between August 2006 and May 2007, 54 couples received counselling for mirror exchange. This resulted in 18 sperm donors and 22 oocyte donors of which 12 opted for the egg-sharing option (a free immediate IVF cycle instead of intrauterine insemination).

Conclusion

The recruitment of gamete donors is a complex issue. The patients, the professionals and governments have to make an effort to tackle the problem. Governments play a crucial role in this task, either by imposing regulation of gamete donation (which frequently comes down to introducing restrictions) or by adopting a laissez-faire approach. In most European countries governments want to keep control over the whole procedure and the rules governing it. They make it their responsibility through regulation. At the moment they are found wanting. Very little money and effort is spent on awareness campaigns for gamete donation. However, the practical aspects are only secondary to the real issue: in which ethical framework do we, as a society, place assisted reproduction with donor gametes? To answer that question, we need a broad societal debate. It would also require a sustained effort to change the ambiguity towards gamete donation that still lives in society and thus indirectly hampers donor recruitment. Moreover, we urgently need a more critical analysis of ethical standards that are brought forward.

Altruism and voluntariness are no absolute criteria. A detailed analysis of the precise conditions and rules of a particular system may reveal that they fall within the range of morally acceptable variants. Just as in the fields of organ and blood donation, we need creativity in designing new systems and flexibility in the application of existing systems if we want to get anywhere close to a reasonable coverage of the need for donor gametes.

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LEGISLATION

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