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# A New Path to Grandparenthood: Parents of Sperm and Egg Donors

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## Abstract

Assisted reproductive technologies have engendered new familial arrangements, some of which challenge traditional assumptions about the relationship between biology and social roles. In this article, we report on the first survey ever conducted of parents of former egg and sperm donors. Twenty-two men and women participated in a survey conducted by the Donor Sibling Registry, a worldwide registry facilitating mutual-consent contact among donor offspring, their gamete donors, and other family members. We report on their feelings and thoughts on learning that their child donated gametes and on learning that they have a grandchild (or grandchildren) via gamete donation. We also examine what type of relationship, if any, participants have formed with their donor-conceived grandchildren, as well as their advice to other parents of donors. We conclude with questions and suggestions for future research into this newly emerging terrain of family relations.

## Keywords

family processes, grandparents, egg donor, sperm donor, assisted reproductive technology, intergenerational

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The growth of trade in human gametes, coupled with increasing openness about the use of assisted reproductive technologies (ART), has resulted in large numbers of individuals learning that they are genetically unrelated to one or both of their parents (Beeson, Jennings, & Kramer, 2011; Jadva, Freeman, Kramer, & Golombok, 2010; Mahlstedt, LaBounty, & Kennedy, 2010). Many of these donor-conceived (DC) individuals are seeking and locating their gamete donor, often despite prior agreements between the donor and the parents that the donor would remain anonymous. This transfer of genetic material, frequently referred to as third-party reproduction, has implications not only for the donor, recipients, and offspring but also for the parents of donors, who in increasing numbers are learning that they are the biological grandparents of one, or sometimes many, children born outside of their family.

In this article, we examine this new path to grandparenthood by reviewing some of the social processes that have led to the emergence of this phenomenon. These include the growing biomedical and cultural emphasis on genetics, the increasing use of donor gametes, and social tensions related to donor anonymity. We then present findings of a survey of 22 men and women whose children have been donors and their thoughts and feelings about becoming grandparents via this path. We use our findings to generate topics and questions for future research into this newly emerging terrain of family relations.

## **Background**

The meaning of family has varied through time and across cultures, but in virtually all societies blood ties have served as the foundation for the development of the social institution of the family. In the current genomic era, blood ties have been reduced to genetic links.

Genetics entered medical practice in most developed countries in the 1970s via prenatal diagnosis, with its forms and indications expanding steadily up to the present (Katz-Rothman, 1986; Rapp, 2000). This development coincided with a major shift in biological sciences during the last quarter of the 20th century that culminated in the 1990 launching of the Human Genome Project, the largest international collaborative research program ever undertaken in biology (United States Department of Energy Office of Science, 2011). The enthusiasm surrounding the effort to map and sequence the human genome was expressed in a public statement by one of its former directors, Francis Collins, who is currently Director of the U.S. National Institutes of Health. He described the project as “the noblest effort humans have ever embarked on” because it will “allow us to read our own blueprint” (Hubbard, 1995).

The valorization of genetics in popular as well as scientific culture became a concern of social scientists by the 1990s, particularly in the United States. Harking to historical attempts to contain the reproduction of groups perceived to be biologically inferior, Duster (1990) warned of the eugenic implications of seeing human beings through a “genetic prism.” Canadian epidemiologist Abby Lippman (1991, 1993) coined the term “geneticization” to question the consequences of a genetic perspective becoming the dominant discourse related to health care. Harvard biologist Ruth Hubbard (1995) shared this concern and characterized the prevailing social mood as “genomania.” Nelkin and Lindee (1995) described in detail how during the 1990s genes came to be seen as “master molecules” shaping virtually all human development and behavior. In analyzing this shift in popular culture, Katz-Rothman (1998, p. 249) noted, “DNA is where we’ve placed the core of the self and the essence of relatedness—into the nucleus, the program, the blueprint, the ‘genes.’”

At the same time the gene was gaining ascendancy as a cultural icon, a global fertility industry was emerging. This was fueled partially by advances in the last quarter of the 20th century in freezing sperm (Daniels & Golden, 2004). Perhaps more important, the 1978 birth in the United Kingdom of Louise Brown, the world’s first baby conceived outside a woman’s womb, accelerated efforts in another difficult aspect of ART, the harvesting of human eggs (Corea, 1988). Experiments in hormonal manipulation to increase women’s egg production, along with improved surgical techniques of egg extraction, led to increasing clinical success (Cohen, 1996; Spar, 2006). Consequently, by the early 1990s a robust market for human eggs had emerged (Dickenson, 2008; Gupta, 2012; Spar, 2006).

This expansion of the fertility trade coincided with a precipitous decline in adoptions in developed countries. The supply of available children no longer satisfied the demand, largely because of the increasing availability of contraception and abortion (United Nations Department of Economic and Social Affairs, 2009). Although these changes contributed to the growth of the fertility industry, another reason artificial insemination and in vitro fertilization (IVF) were attractive to couples with fertility problems was because in most cases they preserved the genetic link between the child and at least one parent.

The emergence of baby making as big business has generated intense ethical debates and a wide range of policy responses in different countries (Spar, 2006) primarily out of concern for the potentially coercive effects of payment for gametes (Daniels, 2000). As a result, regulatory responses to the commercialization of human reproduction and the commodification of components of personhood vary significantly. For example, Australia, Denmark, France, the Netherlands, New Zealand, and Sweden have prohibited compensation for egg donation, whereas Belgium, Czech Republic, Greece, Finland,

Hungary, Iceland, Poland, and Spain have not (Levine, 2012). In the United Kingdom, where ART is strictly regulated, permissible compensation for egg and sperm donors has recently been increased significantly (Starr, 2011).

Nowhere have market values been less restrained than in the United States, but the ethical qualms about the appropriateness of commercialism in the context of human reproduction are nevertheless reflected in the persistent euphemistic use of the term *donation*. This term is applied in virtually all instances of sperm and egg exchange, even in those frequent transactions in which the dollars offered in trade far exceed amounts defined as ethically acceptable by the American Society of Reproductive Medicine (ASRM; Levine, 2010).

Policy responses have differed from country to country not only with regard to commercialization of gametes, but more important for this discussion, on the topic of donor anonymity. Initially, in most jurisdictions donor anonymity was the unquestioned policy, but in 1984 Sweden passed the first law ending it. Several other countries (Austria, Finland, New Zealand, the Netherlands, Norway, Switzerland, the United Kingdom, and parts of Australia) followed suit, suggesting a transnational trend (Bernstein, 2010; Cahn, 2009).

Countries abolishing donor anonymity have established registries to facilitate contact between DC individuals and their donors. In Victoria, Australia, for example, a centralized donor-conception registry, to which clinics and doctors are required to report, was established in 1999, with a voluntary registry containing information about people involved in gamete donation prior to that time (Victorian Assisted Reproductive Treatment Authority, 2012). In the United Kingdom, a government agency, the Human Fertility and Embryonic Authority, collects identifying information on donors, some of which may be obtained by DC people conceived after April 1, 2005, when they reach 16, with identifying information made available when they reach 18. Less complete information is available for those who were conceived earlier, but those who donated between August 1991 and April 2005 can reregister their consent to become identifiable (Human Fertility and Embryonic Authority, 2009).

In North America, donor anonymity is more firmly entrenched. However, a recent challenge to the policy of donor anonymity has been sustained in a decision by the Supreme Court of British Columbia. This decision is currently being appealed to the Supreme Court of Canada, and if upheld will require the entire nation to comply by abandoning the practice (Ravitsky, 2012). In the United States, donor anonymity has been encouraged by the industry and reinforced through legal contracts between physicians and patients. Although no laws address these contracts, the legal system has

consistently affirmed them (Behrman, 1959; Cahn, 2011; Daniels & Taylor, 1993; Frith, 2001). Nevertheless, the ASRM has recently shifted its position slightly by officially endorsing directed known donation, in cases where donors and prospective parents agree (ASRM, 1993; ASRM Ethics Committee, 2004; ASRM Practice Committee, 2008).

The social consequences of third-party reproduction have received less attention than the biomedical issues. Nevertheless, it is becoming increasingly apparent that old understandings of what constitutes family are being profoundly shaken as radically new familial relationships, previously unknown and impossible in human history, are emerging. For example, some children born today may have as many as five parents: the intended parents, an egg donor, a sperm donor, and a surrogate or gestational mother (Cahn, 2009). Social scientists, bioethicists, and legal scholars are among those who have voiced concern about the problematic implications of such developments for our understandings of family (Cahill, 1996; Cohen, 1996; Macklin, 1996; Murray, 1996).

Dolgin (1997) has summarized much of the concern by pointing out that new reproductive technologies disturb traditional understandings of family in two fundamental ways. The first is that because the growing market in infertility treatment involves the exchange of money for gametes and embryos, according to contractual agreements, they “challenge the long-standing notion that the parent–child tie should be founded in love, not money.” Second, insofar as gametes are exchanged between nonfamily members, such practices “muddle assumptions about the social correlates of biological reproduction.”

A variety of social trends in recent years have converged to bring the use of ART out of the shadows and to challenge certain practices related to its use, particularly donor anonymity. Most notably, increasing numbers of single women and lesbian couples are using donor insemination to become parents (Leiblum, Palmer, & Spector, 1995). Although not without other challenges, these parents have a more obvious need to explain the child’s origins, and are also unburdened with the stigma traditionally associated with infertility. As a result, they tend to be more open with their children about their use of donor insemination than are heterosexual couples (Beeson et al., 2011; Brewaeys, de Bruyn, Louwe, & Helmerhorst, 2005; Scheib & Ruby, 2008). Perhaps not unrelated to the growth in the use of ART, there may be a decline in stigma associated with infertility. In addition, young people have become increasingly sophisticated about genetics, genetic testing has become routine for many purposes, direct-to-consumer genetic testing has entered the marketplace, and the emergence of the Internet and social media has facilitated communication about issues relevant to investigating one’s genetic heritage.

The convergence of these and other social factors has resulted in tens of thousands of young people learning that they are not the genetic offspring of one or both of their social parents. As DC offspring respond openly and publicly to learning about their origins, we are seeing their emergence as a new social minority, and, a potentially significant social interest group.

Although these young people's experiences are often somewhat similar to those of adoptees, and much can be learned from the adoption literature (Cahn, 2011; Dolgin, 1997), in many other respects their experience is unique. They may, for example, on learning they are the product of sperm or egg donation, also discover that they have multiple biological half-siblings living in a number of other families. At the same time, former sperm and egg donors are discovering that their original understanding of the meaning of sharing their gametes with strangers has changed with passing years and has consequences they never anticipated (Jadva, Freeman, Kramer, & Golombok, 2011). Such realizations occur particularly as donors and DC offspring locate each other many years later.

It is very difficult to estimate the number of families for whom such developments are relevant. As long ago as 1987, 170,000 women in 1 year in the United States were treated for infertility using "artificial insemination" (Critser, 1998). But there are no registries or reporting requirements to record the number of births from such conceptions. Despite the weakening secrecy, it remains impossible to know how many people are products of this technology, or even how many of these conceptions currently occur annually.

Although reporting is voluntary and thus incomplete, egg donation is somewhat easier to track in the United States than sperm donation. The 1992 Fertility Clinic Success Rate Certification Act links certification to a formal reporting system by requesting infertility clinics that use donor eggs to report their success rate data to the Centers for Disease Control and Prevention. Egg donation is currently used in 12% of all IVF (a figure that reached 17,697 cycles in 2009) and is increasing annually (Centers for Disease Control and Prevention, 2011). Although the ethical, legal, and social implications of these new developments in human reproduction have been considered theoretically, only now is a body of empirical research emerging that addresses the perspectives of those most profoundly affected by ART, the offspring themselves. This literature both reflects and supports a new openness about donor conception and growing numbers of DC offspring seeking information on and contact with their sperm donor (Beeson et al., 2011; Jadva, Freeman, Kramer, & Golombok, 2009; Mahlstedt et al., 2010; Scheib, Riordan, & Rubin, 2005).

For the most part, DC offspring are not seeking their donor primarily with the goal of developing a familial relationship. Rather, they want to learn more

about themselves. This often takes the form of curiosity about the donor's looks, and interest in one's ancestry and medical history (Beeson et al., 2011; Jadva et al., 2010). The interest of the offspring in contacting their donor, often expressed long before the age of 18 when contact information is increasingly made available, is sufficiently compelling that even many parents who originally agreed to anonymous donation have become allies of offspring in their search for their donors (Freeman, Jadva, Kramer, & Golombok, 2009).

At the same time that DC offspring in increasing numbers are searching for, and in many cases finding, their donors, many former donors are also reconsidering their original agreements to be anonymous and are actively seeking offspring conceived years earlier with their gametes, or at least making themselves available to be contacted (Jadva et al., 2011). Moreover, what historically began as efforts to contact donors has resulted in donor offspring also discovering and contacting half-siblings.

As donors and DC offspring in growing numbers find each other, members of a third generation, the donor's parents, are learning that they have biological grandchildren, not as a result of the typical pattern of their children bearing children but rather because their son or daughter has been a sperm or egg donor sometime in the past. The emergence of clusters of donor siblings has received increasing attention in mass media and in scholarly articles, but virtually no attention has been given to the cross-generational relationships that gamete donation may engender.

When Dolgin (1997) suggested that new reproductive technologies muddle the social correlates of biological reproduction, she may have been anticipating some of the following questions: What does it mean to learn that one's adult child has been, some years in the past, a gamete donor? What if a child was successfully created from a son or daughter's gametes? The recipient of such news might wonder, "What is my relationship to such a child (or children)?" Am I a grandparent? Do these children mean the same to me as grandchildren born within our family? Should they?" Some parents of former gamete donors have learned that DC grandchildren do, indeed, exist and would like to meet them. How do parents of gamete donors react to such news? Is it cause for celebration or perhaps even alarm? They might ask, "What does this young donor-conceived person want from me? What does she/he expect? Or perhaps, even more important, "What are my responsibilities toward this new-found grandchild?" Our study offers a preliminary exploration of these and related questions.

In this study, we report on the first survey ever conducted of parents of former egg and sperm donors. Our goal is modest. We describe responses of the participants to learning that their child donated gametes, as well as their feelings and thoughts on learning of the existence of biological grandchildren

resulting from these donations. We also examine what, if any, type of relationship, participants have formed with their DC grandchildren. Finally, we report on participants' advice to potential donors and their parents as conveyed in response to open-ended questions. We use our findings to generate topics and questions for future research into this newly emerging terrain of family relations.

## **Method**

This is a secondary analysis of data collected by the Donor Sibling Registry (DSR), between February 1 and December 30, 2010. The DSR is the only worldwide registry facilitating mutual-consent contact among those in donor families. It has more than 37,000 registrants, most of whom identify themselves as parents of donor-conceived children, donor offspring, prospective parents, and former gamete donors. Members also include other family members and unspecified participants. The survey was designed by the third author, drawing on her experience with previous surveys and her interactions with families in her capacity as cofounder and executive director of the DSR. The survey was conducted without governmental or other institutional funding. Data were collected using an online questionnaire administered via Survey Monkey.

The survey contained 41 questions designed to elicit quantitative and qualitative data. It included questions on the respondent's family, communication within the family on the topic of gamete donation, feelings about gamete donation, and actual and potential resulting offspring and related issues. A link to the survey was posted on the DSR website asking members to encourage any parents of donors they know to complete the survey online. The first and second authors were asked by the DSR to analyze the data after they were collected. We were granted approval to conduct the analysis by the institutional review board at California State University, East Bay.

A total of 18 mothers and 4 fathers ( $n = 22$ ) of egg or sperm donors responded to the survey. Respondents ranged in age from 41 to more than 85, with a modal age category of 61 to 70 years. Ten women and 4 men indicated that they are parents of sperm donors, and 7 women indicated that they are mothers of egg donors. One woman is the mother of an embryo donor. At the time of the study, 14 of the 21 respondents who reported their current marital status indicated that they were married, one was partnered, and the remaining seven were divorced, widowed, or never married. Seventy-three percent of respondents (16) were themselves members, or parents of members of the DSR. Only 8 indicated their country and all but one of those lives in the United States. One lives in New Zealand.

## Limitations

The small sample size limits our ability to conduct complex statistical analyses. We used Fischer's exact test to test a few relationships (e.g., the link between having one's own grandchild and the willingness to develop a relationship with a donor grandchild), but these tests did not yield significant results. This was not surprising given that deletion of missing cases yielded an even smaller sample size when variables were cross-tabulated. Therefore, we are restricted to reporting descriptive statistics on closed-ended questions. However, these statistics are supplemented with qualitative data from open-ended questions asking respondents to expand on their attitudes toward gamete donation.

It should also be noted that respondents, by virtue of the fact that they were recruited by the DSR, cannot be assumed to be representative of parents of gamete donors, but rather the sample is biased toward those who are less secretive about the issue and more open to connecting with DC offspring. Although our data on this topic are limited by both sampling strategy and sample size, we believe it is important to acknowledge this historically unprecedented path to grandparenthood, to provide an initial assessment of some of the issues it raises from the perspective of known parents of gamete donors, and to suggest questions for future research.

## Results

Ten of the respondents reported that they have grandchildren conceived by their own children as well as grandchildren conceived via gamete donation. Nine have grandchildren conceived only via gamete donation. Three parents of donors did not know if they were grandparents of DC grandchildren. Of the 18 respondents who indicated how many DC grandchildren they knew of, 5 knew of only 1, 7 knew of 2 or 3, 4 knew of 5 to 9, and the last 2 knew of 10 and 11.

Nine of the respondents' children donated gametes within the past 10 years and another nine had donated between 16 and 25 years ago. Four fell in between. Fewer than half (8) or 36% of the respondents' children had discussed gamete donation with them before the donation. Of the 21 respondents who revealed when their child told them of the donation, 36% (8) were told before the donation occurred, 32% (7) told them shortly after the donation occurred, and 23% (5) told them many years after the donation. One respondent only learned of the donation when contacted by the DC offspring. Most of those who learned about the donation beforehand were mothers of egg donors, but two mothers and one father of sperm donors also knew beforehand.

Respondents were provided with 11 statements that captured their thoughts and/or feelings when they first learned that their child had donated.

**Table 1.** Respondents' Initial Thoughts/Feelings About Their Child Donating.<sup>a</sup>

Thoughts/feelings ( <i>n</i> = 21)	%	<i>n</i>
Proud my child was helping those who couldn't have children otherwise	52	11
Curious to know if a child resulted from donation	38	8
Happy I might have grandchildren	38	8
Surprised	29	6
Concerned about my egg donor daughter's health	24	5
Uneasy	19	4
Worried about the legal ramifications	14	3
Upset	9.5	2
Worried that there might be too many children born from the donation(s)	9.5	2
Worried offspring might want money	5	1

a. Respondents were asked to check all that apply.

Respondents could check any of the 11 options that applied. Fifty-two percent (10 females, 1 male) of those answering this question indicated that they were "proud" that their "child was helping those who couldn't have children otherwise" (see Table 1). Thirty-eight percent (7 females, 1 male) indicated that they were curious to know if a child resulted from the donation. An equal number (8) were happy to hear that they may have a grandchild, and 29% (6) reported that they were surprised.

Respondents also expressed negative feelings and concerns. For instance, 24% (5) of mothers of egg donors were concerned that the donation process could damage their donor daughter's health. Nineteen percent (4 females) indicated that they felt "uneasy" when they first learned their child had donated. Fourteen percent (two females, one male) were concerned that there could be legal ramifications; two (9.5%) female respondents worried that "there might be too many children born from the donations," one mother of an egg donor and one father of a sperm donor indicated that they felt "upset," and one female respondent worried that the DC grandchild might want money. None selected the option "wished my child had come to me for advice before donating."

### *Learning of Donor-Conceived Grandchildren*

Respondents were asked to indicate their emotional response on learning that they had a DC grandchild. Positive feelings predominated (see Table 2).

For instance, 61% (9 females, 2 males) of those answering this question reported that they felt thrilled, and 59% (8 females, 1 male) felt excited. Sixty-one percent (9 females, 2 males) checked that they were curious on

**Table 2.** Emotional Response on Learning of a Donor-Conceived Grandchild.<sup>a</sup>

Emotions ( <i>n</i> = 18)	%	<i>n</i>
Curious	61	11
Thrilled	61	11
Excited	59	9
Confused	17	3
Worried	17	3
Neutral	0	0

a. Respondents were asked to check all that apply.

learning that they had a DC grandchild. A smaller number of respondents indicated that they felt worried (three females) and/or confused (2 females, 1 male). None of the respondents selected the “neutral” option.

Respondents also were asked to indicate their thoughts when they first learned of the existence of a DC grandchild. All but a few of the respondents wanted to learn more about, or to have some type of contact with, the child (see Table 3). For instance, 68% (11 females, 2 males) “wanted to learn more” and 42% (6 females, 2 males) “wanted to meet them as soon as possible.” Twenty-six percent (5) females indicated they were “enthusiastic, but respected my child’s wishes to be hesitant.” Twenty-one percent (2 females, 2 males) indicated that they were “hesitant” because they were “worried about the impact on their own child.” In reference to her two DC grandchildren, one mother of a sperm donor, in her early 50s, with grandchildren in her own family, checked “hesitant, but committed to getting to know them.” Another female in her late 40s, whose daughter was an egg donor and who had no grandchildren in her family, reported “no interest” in meeting DC grandchildren but did want to “exchange information.” Several respondents selected more than one option. For instance, of the 11 respondents who wanted to “learn more,” five also wanted to “meet them as soon as possible.” One respondent checked four response options (i.e., wanted to learn more, wanted to meet, was hesitant because they were worried about their own child, and they were hesitant but wanted to meet). None of the respondents indicated that they were opposed to all contact.

### *Connecting With Donor-Conceived Grandchildren*

Twelve of the 19 respondents with DC grandchildren have met one or more of them in person. All but 2 of the 12 are mothers of donors. Three have additional DC grandchildren that they know of, but have not been in touch with.

**Table 3.** Respondents' Thoughts About the Child When They First Learned of Donor-Conceived Grandchild.<sup>a</sup>

Thoughts/feelings ( <i>n</i> = 19)	%	<i>n</i>
Wanted to learn more	68	13
Wanted to meet the child	42	8
Enthusiastic, but respected my own child's wishes to be hesitant	26	5
Worried about impact on my child (donor)	21	4
Hesitant, but committed to getting to know the child	5	1
No interest in meeting, but willing to exchange information	5	1
No interest in any contact	0	0

a. Respondents were asked to check all that apply.

Two respondents have been in touch with the DC grandchild via phone or e-mail, but have not met in person. One respondent, whose grandchild is very young, is in touch with the parents only, and four know of DC grandchildren but are not currently in touch with them.

Contact between grandparent and first DC grandchild was made by the time the child was 10 years old in six cases. Four respondents reported that first contact was made between the ages of 11 and 13, one between the ages of 14 and 16, and three made contact when the DC grandchild was between 17 and 20 years of age. Those who reported having made contact had done so within the last 5 years. In most cases, contact between grandparent and DC offspring was a result of prior contact having been established between the donor and the offspring or his or her parents, usually through the DSR. In one case the donor's mother, after alerting the fertility clinic of her egg-donor daughter's premature death from cancer, was contacted by the recipient-parents. The subsequent connection was a result of the donor's mother's effort to provide potentially important health data to the recipient-parents.

Recognition of potentially heritable health problems became a factor in the decision to pursue contact between donor and offspring in another case: the mother of a sperm donor responded "aortic enlargement" in answer to the question, "Did you have any health issues that were important to share with your grandchildren?" In total, 36% of respondents (seven females, one male) checked yes to this question.

### *Reasons for Reaching Out to Donor-Conceived Grandchildren*

Although only 14 participants report that they have had some type of contact with DC grandchildren, 18 respondents identified a main reason to reach out

**Table 4.** Main Reason for Reaching Out to Donor-Conceived Grandchild.

Reason ( <i>n</i> = 18)	%	<i>n</i>
Since they were created with my DNA, they are part of me	39	7
They are my grandchildren	33	6
It is important to my child	17	3
Donor children reaching out deserve a response	5.6	1
My child is deceased, so it was important to connect	5.6	1

**Table 5.** The Second Most Important Reason for Reaching Out to Donor-Conceived Grandchild.

Reason ( <i>n</i> = 16)	%	<i>n</i>
It is important to the donor grandchild	38	6
Since they were created with my DNA, they are part of me	31	5
They are my grandchildren	19	3
Donor children reaching out deserve a response	6	1
I wanted to experience grandparenting	6	1

to the child. Thirty-nine percent of respondents (5 females, 2 males) selected “Since they were created with my DNA, the child is part of me” as the main reason to reach out (see Table 4). “They are my grandchildren” was selected by 33% (4 females, 2 males). Seventeen percent (3 females) indicated, “It was important to my child that I reach out.” One female indicated that DC children who reach out “deserve a response.” Another female respondent indicated that she wanted to connect with her DC grandchild because, as noted above, her own child was deceased.

When asked to indicate the second most important reason for reaching out, 38% (4 females, 2 males) selected because “it was obviously important to my donor grandchild” (see Table 5). Thirty-one percent (5 females) felt connected through DNA, and 19% (3 females) indicated “they are my grandchildren.” One mother of an egg donor indicated that the DC grandchild deserves a response, and one male with no grandchildren within his family wanted to experience having a grandchild.

When asked to describe their current relationship with the first DC grandchild, five respondents, all parents of sperm donors, ranging in age from early 60s to more than 85, reported they maintain an ongoing relationship, whereas four mothers of egg donors and the father of a sperm donors in his early 50s indicated that they have met the DC child a few times. Two respondents have

met the DC child once, and seven have not met them at all. Of the seven who have not met, two have been in touch via phone or e-mail and one planned to meet the DC child at some point.

Grandparents appear to be less willing to establish relationships with subsequent donor grandchildren. For instance, of the respondents who have a second DC grandchild, seven do not plan on having any contact. One respondent keeps in touch via phone or e-mail, one has met the child one time, and four have met them a few times. None of the respondents reported that they have an ongoing in-person relationship with any but the first DC grandchild.

### *Grandchildren Within the Family and Donor-Conceived Grandchildren*

Respondents who had grandchildren within their own family were asked to select a statement that described their relationship with the DC child they communicate with the most. Of the 14 respondents who answered this question seven indicated that the relationship is “the same as a grandchild, I might have within the family,” while four indicated the relationship felt like that with a family member, but “not quite like a grandchild.” One felt the relationship was like that with a distant family member, and one felt it was not at all like that with a family member. One mother of a sperm donor responded, “I feel closer to my donor grandchild than I do to other grandchildren I have within the family.”

Open-ended comments suggest that, for some, the connection to DC grandchildren can be an enriching family experience. For instance, one woman stated that she “would risk finding any grandchild because it can be a blessing to all.” Another respondent indicated that she and her husband “have enjoyed meeting the children.” She recommended to other DC grandparents, “If you are at a time in your life when you can meet them, the rewards can be great.” One woman stated that she “prays for her grandchildren every night both those donor conceived and those not.” She went on to state that the children “are absolutely wonderful” and that she is “truly blessed.” Six respondents stated, “They are my grandchildren,” and one stated, “They are part of the family.”

One indicator of positive feelings toward the DC grandchild is the respondents’ attitude toward inheritance. Of the 13 respondents who planned on leaving an inheritance to their grandchildren within their family, 8 indicated that they also intended to include their DC grandchildren. Two explained in open-ended comments that any inheritance will go to their children rather than to any of their grandchildren. Others were undecided or did not answer this question.

Some respondents developed relationships with the parents of the DC grandchild. For instance, half of the grandparents who were in touch with DC

grandchildren indicated they consider the parents of the DC grandchildren “like family to me.” Four have had no contact with the parents, while two indicated, “They are more like friends to me.”

### *Advice to Potential Donors and Their Parents*

When asked what advice they would give to people considering gamete donation only three respondents, all parents of sperm donors, two mothers and one father, provided unqualified encouragement. The father, a man in his late 60s who has no grandchildren within his family, explained that donation is “a very good option for families in need.” One mother of an egg donor said, “Don’t do it,” adding the explanation: “It is too complicating for the families created afterwards.” Most of the respondents either declined to give advice (12) or urged careful consideration of the matter.

Some of the reservations focused specifically on the interests of the offspring. The mother of a sperm donor, in her early 70s, with DC grandchildren as well as grandchildren within her family advised, “Put yourselves in the shoes of the future children,” whereas the mother of an egg donor wrote, “Make sure you understand the consequences of donation—actual babies who grow up into people.” Others focused on the implied possible loss of the biological connection with potential offspring—for the grandparents and the donors themselves. For example, a divorced woman in her early 50s who has no grandchildren within her family, whose son was a sperm donor, advised, “It is a wonderful gift to people who can’t conceive but it is also not the norm. Consider the feelings of the other people who are involved. I miss my never seen grandchildren!” The mother of a repeat egg donor, who has no grandchildren within her family, but who indicated she would like to meet DC grandchildren, if there are any, urged, “Think about how you will feel later in life not knowing the children that might be out there somewhere.

Similar advice came from another mother of an egg donor, who is very happy to be in touch with her DC grandchildren:

Potential egg and sperm donors also need to be counseled that they may feel differently years later about possibly having biological offspring somewhere. If they choose anonymity, they may change their minds years later and want contact. Sperm donors need to know that they may end up having dozens of biological children.

An issue that evoked lengthy open-ended comments was the health risks of egg donation and these comments came from mothers of egg donors. For example, one woman in her early 60s whose daughter recently donated, urged, “Make sure you know what the process involves—time, discomfort,

and risk.” A more ominous piece of advice came from the mother the deceased egg-donor daughter:

Because there are known short-term health risks and unknown long-term health risks of egg donation, you need to encourage your daughter to look into these risks, do online research, and discuss them with physicians. Your daughter needs to know that IVF clinics have a conflict of interest regarding giving a lot of information about risks to potential egg donors, and may not clearly explain that there have been NO published studies of the long-term health risks to egg donors, such as infertility and various cancers.

These comments from mothers of egg donors highlight significant differences in health risks between egg and sperm donation.

## **Discussion**

This small exploratory study of parents of sperm and egg donors and their relationships to actual and potential DC biological grandchildren provides a first glimpse into some of the social issues that may potentially arise from this new path to grandparenthood.

First, it is noteworthy that parents of gamete donors are often unaware, until after the fact, their children have passed on their genetic material. It is clear from this limited sample that when parents of donors learn about the donation, their initial reactions may run the gamut from very proud to worried and upset. Although our sample is not representative of all parents of gamete donors, it does show that some individuals may be very interested in making contact with their DC grandchildren while others are hesitant. Both the enthusiastic welcoming of previously unknown grandchildren, and the hesitant responses of others in response to the same news, tell us that the genetic component of kinship may be taken very seriously by grandparents, perhaps even more seriously than by the children who “donated” or sold their gametes some years earlier. But much more research is needed to determine the social conditions under which the various responses occur.

The wide range of reactions provided here of parents of gamete donors to both the possibility and the reality of offspring resulting from their children’s sharing of genetic material with unrelated families suggests further research into the intricacies of this path to grandparenthood may be a fertile field for exploring, and perhaps even disentangling analytically, the cultural and biological dimensions of relatedness across generations.

A useful framework for exploring the complexities of these intergenerational relationships is provided by Stack and Burton (1993). All family members, including grandparents, forge identities within interdependent relationships

whose meaning is framed through family socialization and negotiations, or what she refers to as “kinscripts.” This framework focuses attention on the temporal and interdependent dimensions of the life course of individuals and families as they are constructed and maintained within social, cultural, and historical contexts. Kinscripts serve the function of linking family members across generations and transmitting role expectations to family members through time, and as Kirkman (2003, p. 2230) suggests, this is a process best understood in qualitative terms: “It is through stories that family members understand themselves and their place in the family.” Where Kirkman (2003) and others have examined how donor conception informs and/or disrupts family scripts, no study has examined how family scripts are negotiated and/or renegotiated for individuals who learn that they have become grandparents via egg or sperm donations.

The concept of family scripts or kinscripts provides a useful framework for describing both what is missing in these relationships and what must be reconstructed when contact occurs between the DC offspring and the donor and/or the donor’s parents. Qualitative research on these relationships would be most helpful in examining how parents of gamete donors negotiate multi-generational relationships that unfold in this nontraditional way.

Kinscripts of individuals implicated in gamete donation have some unusual characteristics. Some of the parents of gamete donors in our study only became aware of the grandchild when the DC grandchild was a teen or older. Moreover, grandparents who manage to establish contact with the child at a younger age may not play a central role or have consistent interactions with the child until the child is older. For instance, recall that only five of the respondents in our study had regular contact with their first DC grandchild, and four of these same respondents had met with their second DC grandchild only a few times. Thus, relationships resulting from DC may often be formed in the absence of shared kinscripts or shared family norms, ideology and behavior.

Yet the data provided in this study align with findings from adoption studies that found reunions between biological relatives are often very positive experiences for parties involved and can contribute significantly to greater peace of mind (Triseliotis, Feast, & Kyle, 2005). Adoptees being reunited with their birth mothers or other family members are quite similar to donor-offspring seeking their donor families in that they take place because of the perceived importance of a biological connection and in the absence of shared social experiences.

The importance of genetic connection was apparent in the responses of some of the participants in this study. For example, several parents of gamete donors consider the offspring created with their child’s egg or sperm to be

“part of me,” “family,” and/or “no different than grandchildren born within the family.” For these respondents the biological connection was definitive of a familial relationship. Respondents such as these may be willing to engage in a renegotiation of the family script so that the DC grandchild becomes a part of the ongoing family history—part of the family genealogy. But, like birth families of adopted children, even in light of positive reunions, this group will be faced with the complexities of renegotiating a family script in a context that involves multiple families (i.e., their donor child, the DC grandchild, the recipient parents and their parents). Moreover, the “discovery” of multiple DC grandchildren can further complicate family processes. If our finding that donor grandparents have less contact with subsequent DC grandchildren holds in larger studies, then we must ask how multiple DC grandchildren will affect kinscripts for the donor, the child, and the recipient family.

The next step in expanding our understanding of the implications of gamete donation for parents of donors is to determine under what social conditions the various potential responses are most likely to occur. This modest descriptive study has generated questions that deserve further study with a larger sample of parents of children who have donated eggs and/or sperm. Our findings led us to reflect on a number of these.

One such question is: How do perceptions of medical risk influence views toward and acceptance of gamete donation among the parents of donors? Parents of egg donors are faced with additional considerations given that the medical processes involved in egg donation are much more invasive and riskier than sperm donation. Expressions of such concern by five mothers of donors in this study support this claim. Such comments are consistent with mounting scientific evidence that this is a legitimate cause for concern (Althuis et al., 2005; Calderon-Margalit et al., 2009; Pearson, 2006). Recently, the physician mother of an egg donor who—despite the absence of any family history of the disease, died at 31 years of age of colon cancer—has publicly called for a drug-specific registry of egg donors so that long-term side effects can be better understood (Schneider, 2008). Noting that her daughter was not the only former egg donor to succumb to colon cancer in her 30s, she is concerned that “at present potential egg donors cannot give truly informed consent because insufficient information exists about their long-term risks.” This issue of long-term health effects is a major difference between egg and sperm donors that may reverberate through the extended kin network, possibly with more salience for mothers of donors than for fathers, given the tendency of women to be more attuned to health issues.

Another question deserving further research is: Do parents of gamete donors who have no grandchildren being raised within their own family

show more interest in contacting DC offspring than those who already have grandchildren? Does this group have more interest in establishing relationships with DC offspring? It is not surprising that our findings did not show this to be the case given that our respondents were recruited from the DSR. Thus, further study with a larger sample is needed to fully address this question.

Are parents of gamete donors who discover they have many DC grandchildren more hesitant to make contact than those with fewer such grandchildren? And how will this affect the donor child? How do donor grandparents negotiate relationships with the parents of recipient couples? Does the quality of the child's relationship with the recipient couples' parents (their social grandparents) influence the biological grandparents' decision to maintain and/or develop a relationship with the DC offspring? A related issue that future research might explore is how parents of lesbian and gay children perceive their DC grandchildren compared with parents of heterosexuals. In cases such as these, does the absence of a traditional path to grandparenthood influence feelings about DC grandchildren?

Despite the limitations of this study, important and surprising findings emerged from the 22 respondents who participated in the survey. Among these is the importance placed on genetic ties by many parents of egg and sperm donors and the fact that parents of donors who have grandchildren within their family appear no less interested in contacting their DC grandchildren than those with no such grandchildren. These findings lend some insight and suggest ideas for future study into the ways that family relationships are shaped and re-shaped in the expanding landscape of assisted reproductive technologies

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