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Receiving, or 'Adopting', Donated Embryos to Have Children: Parents Narrate and Draw Kinship Boundaries

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Abstract: Existing research suggests that embryo donation (ED) may be seen as similar to adoption by those who donate or receive embryos, or it may not. Our qualitative study explored whether having a child via embryo donation initiated kinship connections between embryo donor and recipient families as interpreted by recipient parents. Interviews were conducted with five parents from four families whose child(ren) had been born via embryo donation. All four families had an open-contact relationship set up with the couples who donated their embryos through an agency in the USA. Narrative thematic analysis of interview data and visual family map drawings were used to explore kinship conceptualizations. We conclude that the dilemma experienced by parents who have a child via embryo donation is to decide how to reconcile their child's different genetic heritage, when gestation and upbringing both clearly boundary family membership solely within the recipient family. While some families were still struggling with this dilemma, one solution embarked upon by some parents when drawing their family map was to expand family membership, not only on the basis of genetics, but also via an appreciation of shared family and community values too.

Keywords: embryo donation; open-contact adoption; genealogy; genograms; family relationships; kinship; qualitative research methods

1. Introduction

Genealogical techniques and interviews provide rich opportunities to research the ways in which families narrate their identities far beyond collecting names, dates, occupations, and geographic location (Smith 2017). While acknowledging the many varied definitions of family within present-day western societies, Smith defined family members as "those located somewhere within the family 'tree,' or network" (Smith 2017, p. 1). Other authors have noted that traditional western concepts of kinship drawn as a family tree or a pedigree are too constraining for many contemporary families. For example, in practicing critical genealogy to build ethnic identity, Scodari has argued against taking a genetics-only approach to collecting family history (Scodari 2016). Also, researchers exploring the family relationships formed by LGBTQ people have introduced conceptions of kinship based on

families-of-choice (Swainson and Tasker 2005; Tasker and Delvoye 2018, in press; Weeks et al. 2001; Weston 1991).

The research presented here concerns how one group of heterosexual couples who had received donated embryos to have children, designated and described their social and genetic relationships as family (or not) through a new genealogical technique—family map making (Tasker et al. 2018). In open adoption, social services are asking adoptive parents to help their child to remain in contact (however minimal) with birth relatives, thus challenging adoptive parents to broaden their concept of kinship and family to include their child's birth family members (Jones and Hackett 2011). Likewise parents-to-be who receive donor sperm, donor eggs, or both as in the case of embryo donation (ED), to start a pregnancy are encouraged by assisted reproduction clinics and, under some jurisdictions mandated, to disclose this information to resulting children at some point. In New Zealand, potential donors and recipients are required to meet and negotiate future contact before embryo donation is allowed to proceed (Goedeke et al. 2015). In several states in Australia, birth certificates will include the notation 'further information available', which, while not directly disclosing the child's embryo donation origins, underlines the child's 'right to know' as parents are required to register that the baby was donor conceived at time of birth certificate (Kelly 2015). The donation of remaining embryos created as a product of in vitro fertilization (IVF) has been likened to prenatal adoption, particularly in Christian circles, with clinics in the USA receiving donated frozen embryos and acting as an agent between donor and recipient parents to give each embryo a chance of life and keeping in contact with each other (Taylor-Coleman 2016). In our research we address the question: are in-contact embryo donors and their relatives deemed family members by recipient parents, and if so, to what extent?

1.1. Embryo Recipients and Adoptive Parents

Using donated embryos to begin a pregnancy was first recorded in 1983 (Trounson et al. 1983). In embryo donation neither the egg, nor the sperm that fertilized it, are the genetic gametes of the recipient parent or parents. Embryo donation may be seen as similar to adoption by those who donate or receive embryos (Goedeke et al. 2015) or it may not (Millbank et al. 2017). Most embryo donation appears to take place as a by-product of IVF when couples have produced more viable embryos than they want to implant and decide to donate the remaining embryos to another recipient family (Golombok 2015). Double donation sometimes occurs with the intended parent or parents commissioning the IVF treatment using either donated sperm, or donated eggs, and then donating some of the resultant embryos on to a further recipient. Embryos also can be created from donor gametes for the express purpose of embryo donation, although the extent of this practice varies and it appears to be relatively uncommon in Europe (Prag and Mills 2017).

Having children through receiving donated embryos has implications for family relationships that are both similar to, and yet crucially different from, those encountered in adoptive parenting. Often heterosexual adults wanting to adopt will have contacted adoption agencies after several attempts at fertility treatment. Of the heterosexual couples who had adopted in the Cambridge Adoption Study, 90% had been unsuccessful in trying assisted reproductive technology prior to adoption, whereas far fewer lesbian or particularly gay adoptive parents had previously done this (Mellish et al. 2013). Similarly, parents of children from donated embryos may have experienced many previous attempts at fertility treatment using their own gametes (Soderstrom-Anttila et al. 2001).

Both children of embryo donation and adopted children have an originating family network in their background. For adopted children, their originating family network comprises their birth family relatives, although this may be complicated through parental separation and family reconfiguration. For children born from embryo donation, this network will be based upon their gamete donors, the other children of the gamete donors, and also the genetic relatives of the gamete donors. Furthermore, just as adopted children's knowledge of and contact with birth families varies according to state policy (Jones and Hackett 2011), children conceived by embryo donation may have different knowledge of donors under different legislative and value contexts (Frith and Blyth 2013).

When donated embryos have been formed as part of IVF treatment for the genetic parents it is plausible that their genetic parents will want to have a stake in keeping in touch with their genetic offspring, who are also full genetic siblings to their own children. However, some IVF couples donating embryos may want donor information strictly controlled because of fears that donor children may try to contact them; one Australian survey indicated that this concern was a key reason why some IVF couples decided not to donate remaining embryos (Millbank et al. 2013). In essence three possibilities exist in terms of the openness of embryo donation: (a) open where the gamete donor(s) and the recipient(s) know one another; (b) closed, albeit with the possibility for children to access information about their gamete donor(s) when they reach adulthood; and (c) semi-open where anonymous donor–recipient contact is mediated by an agency, although participants may later open the relationship and be in-contact. For example, in the UK closed situation, once the donor(s) have decided to donate, the decisions regarding who receives embryo donation are made by assisted reproduction clinic staff and regulated according to law. The donor is allowed to express some preferences but this right is balanced by equality legislation, for example, the donor cannot exclude potential recipients on basis of any protected characteristic. Donors receive no information about the recipient and limited information about resulting child(ren) and vice versa, nevertheless since April 2005 donors cannot remain anonymous from their donor conceived offspring upon adulthood (Frith and Blyth 2013; HFEA 2004).

Frith and Blyth (2013) have contrasted the state-regulated UK situation with embryo donation agencies in the US, many of which are run by pro-life Christians, who tend to view the embryo donation as the adoption of a potential life. Furthermore, these faith-based agencies allow embryo-donating couples to specify that they want to keep in touch either via the agency (semi-open) or openly and to choose the couple who will receive their embryos from the profiles they are sent. Thus, like adoptive parents, those who receive donated embryos often undergo scrutiny by the agency and by the originating family, albeit without the extensive vetting and parenthood training engaged in when children are placed by adoption services. Frith and Blyth have argued that this is an example of a specific selecting, non-anonymous model of embryo donation. When embryos were implanted the recipient families in the current study had all been donor-selected and had contact arrangements in place mostly via agency mediation (semi-open) which may or may not have moved to open contact. We have characterized this as an in-contact model.

Two important distinctions between parents having children through embryo donation and adoption need to be highlighted. First, the donated embryo is implanted in the mother-to-be's uterus. Thus, unless a surrogate mother is employed, the mother will have a biological connection to her embryo donated child through gestational motherhood. In the case of embryo donation to a couple both of the child's parents will have been there from birth and in most jurisdictions no distinction will be made on the child's birth certificate to indicate a third-party via assisted reproductive technology (ART) birth. Embryo donors release rights to possible parenthood and a potential child when they sign over the batch of embryos prior to transfer. In contrast, even in an early adoption there will have been relinquishment of the baby by the birth mother.

Second, the struggling situation of the birth family whose child has been taken into care, or more rarely, the birth mother who has given up her baby for adoption, is usually markedly different to that of the adoptive parents looking to have a much wanted child. In contrast embryo donors donating remaining embryos from their own IVF treatments may particularly empathize with the recipients of their embryos: the donors themselves had endured infertility and finally had much wanted children against the probable odds of IVF success. Furthermore, those who donated remaining IVF embryos via a faith-based embryo adoption agency may be particularly motivated to keep in touch with the embryos that could have the potential to become full siblings to their own children, but were 'adopted' by much loving families with similar values. Embryo donation is likely also to be experienced differently from single gamete donation (egg or sperm); gamete donation is seen not

as giving a chance to life itself, but as helping in part of the reproductive process or as a financial transaction (Provoost et al. 2009).

Research studies generally point to the benefits of open adoption with continued contact between the adopted child and birth family relatives; one review concluded not only that children found post-adoption contact beneficial, but also that the majority of birth relatives and adoptive parents did too (Triseliotis 2011). Yet longitudinal research on adopted children growing up has suggested that heterosexual adopters, birth relatives and adopted children have a variety of experiences of post-adoption direct and indirect (letter-box type) contact and that open communication within the adoptive family rather than contact per se is often key to children's well-being (Neil et al. 2015; Von Korff and Grotevant 2011; Grotevant et al. 2013). Furthermore, research on the transition to adoptive parenting has indicated that heterosexual adopters often struggle to resolve their expectations of a fresh start to family life with their child's pre-adoption history and their child's conceptualization of family (Tasker and Wood 2016). Jones and Hackett (2011) have pointed to the challenge for adoptive parents to come up with a new model of kinship that sustains both adoptive family and birth family connections for the child.

Intriguingly, the situation of children born from embryo donation has been relatively under-explored relative to the growing number of studies on the physical well-being, psychosocial adjustment and family relationships of children born through gamete donation (Golombok 2015). Previous studies of parents of embryo-donated children have typically sampled parents who have had very limited information about the donors. For example, a longitudinal UK study following up parents and their children from pre-school to elementary school found that those conceived via embryo donation received high levels of nurturing, warm, and child-centered age-appropriate parenting, similar to that experienced by comparison group families with adopted children or genetically related children conceived via IVF (MacCallum et al. 2007; MacCallum and Keeley 2008). Thus, there was no evidence that indicated that genetic or gestational links necessarily made a difference to positive parenting and findings on children born through embryo donation were comparable with general findings from other studies on children of gamete donation (Golombok 2015). However, in MacCallum et al.'s study striking differences were found in terms of actual and planned disclosure of children's origins between parents whose child came from embryo donation when rates of disclosure were compared to those of parents of IVF or adopted children. At the follow-up point in middle childhood only 3/17 mothers of children in the embryo donation group had already told their child something about embryo donation with a further four mothers expressing an intention to disclose at some point (MacCallum and Keeley 2012). In contrast, all of the adopted children in the study already knew they were adopted and only three of the parents of the IVF children had decided not to tell their child, or were still deliberating disclosure. However, while the ED children in the sample were unlikely to have been told about their embryo donation origins, nearly 75% of mothers in the sample had disclosed to another family member (often their own parents) that their child originated from a donated embryo (MacCallum and Golombok 2007).

Researching in the open donation context of New Zealand, Goedeke et al. (2015) interviewed both embryo donor and recipient families and reported that both parties viewed the shared genetic connection between donors and embryo-donated children as creating a lasting and meaningful social link with the donor family (Goedeke et al. 2015). Furthermore, Goedeke and colleagues indicated that both donor and recipient families drew upon concepts of extended family and open-adoption to understand their experience, although using these terms added complications too. Likewise, Blyth and colleagues (in press) who conducted a qualitative survey with donor and recipient families recruited via a USA Christian agency also found that both parties referred to embryo donation creating multiple family memberships, but stated that careful negotiation of family boundaries was necessary to ensure that contact between families proceeded smoothly (Blyth et al. 2018). Nevertheless, neither Goedeke's nor Blyth's research teams specifically concentrated on systematically exploring family membership implications with genealogical research techniques.

1.2. Genealogy, Family Trees, Genograms, and Family Maps: Visual Narrations of Family Membership

Genealogical techniques have rarely been employed in social science research (Nash 2017). When discussing the absence of genealogy in research studies, Nash noted the tension between the radical demographic potential of genealogical research and the traditional pull of essentialist ideas about kinship, which might be emphasized in visual depiction. Genealogical techniques, such as pedigrees or more colloquially family trees, may yield valuable information, especially when there may be differences between family members in terms of who counts as family and how close each family relationship is. As Kretsedemas has asked: "What new forms of cultural agency and filiation does it [genealogy] make possible? (And just as important, what possibilities and historical memories does it rule out?)" (Kretsedemas 2017, p. 1).

Genealogical techniques, namely genograms and their derivatives, also have been developed and promoted within systemic psychotherapy to be used both in assessment and intervention in a wide variety of family systems (McGoldrick et al. 2008). Just as Nash (2017) noted the absence of genealogical reference in the social science research, Rempel and colleagues expressed similar surprise at the absence of genogram techniques in clinical research (Rempel et al. 2007). Conventional genogram notation has struggled to keep pace with contemporary developments in family formations. Consequently, both clinicians and researchers have kept the genogram aim of charting intergenerational family relationships as emotional, social and cultural markers or resources, but allowed clients or participants to define and visually depict family in a wider way (Milewski-Hertlein 2001; Swainson and Tasker 2005; Tasker and Granville 2011; Tasker and Delvoye 2018, in press). In particular the Family Mapping Exercises developed by Tasker and colleagues have enabled both adult and child family members to articulate family membership in a genogram form with minimal constraint on inclusion criteria (Tasker et al. 2018).

1.3. Research Aim

Our purpose in this paper is to explore how parents who have a child from a donated embryo consider family membership for themselves and their children and to contrast this with the situation in open adoption. More specifically we considered what role genetic relationships played in connoting family membership in relation to genetic donors and those who shared the same genetic heritage: could family membership be determined purely on the basis of shared genetics, or were there other psychosocial markers that formed boundaries within family subsystems, or denoted a boundary between family and others?

In order to explore the concepts behind family membership employed by parents of a donated embryo child we selected participants from a wider sample of families who had donated or received embryos. From this sample our strategy was to select participants from two-parent heterosexual couples where the mother had undergone pregnancy and gave birth to a child who was not genetically related to her or her partner. These selected embryo recipient families also were in a comparable situation to open adoptive parenting because recipient parents all had an initial contact agreement with the embryo donors. These embryo donors had donated remaining embryos from their own IVF treatment, from which they already had children.

2. Materials and Methods

2.1. Participants

Parents from four families with children conceived through embryo donation were interviewed: four mothers and one father who was interviewed together with his wife. One of the parents (Melissa) was interviewed together with one of her sons (Rhys) who had been born through embryo donation but only Melissa's data has been included in this paper. All four families were two-parent heterosexual couples in which both parents had graduated from university; two couples were of mixed ethnic

heritage while the other two couples were white. Brief demographic details for each participating family can be seen in Table 1. All of the participants were from the USA and lived in different states.

Table 1. Summary of participant information.

Main Participant's Pseudonym	Additional Participant's Pseudonym & Relationship	Mother's Age at Time of Interview (Years)	Number of Children and Their Ages (Years)	Donors Have Made Further Donations to Other Families
Judith	N/A	45+	Son (aged 5) & daughter (aged 3) from the same donors	Yes
Ella & Jamie	Jamie (Ella's husband)	40+	Daughter (aged 2)	NB embryo donor couple used donated eggs to create embryos and egg donor may have donated elsewhere.
Anne	N/A	40+	Son (aged 7) and twins (aged 5) from the same donor	No
Melissa	Melissa's son (Rhys) present at Melissa's interview.	35+	Son (aged 12) and son (aged 10) both from different donors + sister (aged 21) domestic adoption	Yes

Prior to receiving donated embryos one couple had first tried to conceive their own children and then tried IVF with their own gametes; in fact Anne and her husband were still trying to conceive using IVF. Two families described themselves as having married late and were recommended to try embryo donation after discussions with a fertility specialist. Melissa and her husband had a child via the domestic adoption system prior to their first fertility attempt with donated embryos.

All four families had received a donated embryo through a faith-based (Christian) agency that facilitates the adoption of frozen embryos that would otherwise be discarded. The agency assisted in the profiling and brokering of agreements between embryo donors and embryo recipients, organized the legal transfer documentation from donors to recipients, and facilitated the transportation of embryos between medical facilities (Blyth et al. 2018).

2.2. Interviews, Materials and Procedure

The research project recruitment and qualitative interview procedures, confidentiality and data storage procedures were approved by an Institutional Review Board. All participants gave their consent for the audio recording of the interviews and also completed a brief socio-demographic questionnaire. The face-to-face interviews, which lasted between an hour and two and a half hours, were conducted over a video call with a member of the UK-based research team. Each interview started with an open invitation from the interviewer to encourage each participant to speak about their experience of receiving a donated embryo, and the interviewer then followed up with further questions seeking further details of the person's experience. The session included the family map exercise towards the end of each interview.

Each participant was asked to draw a map of their family using the adult family map exercise described by Tasker et al. (2018). In the couple interview Ella drew the family map and Jamie watched and sometimes commented or suggested ideas. At the start of the family map exercise participants were asked "When you think about your family now, what comes into your mind and who comes into your mind?" Participants were then asked to draw a map of their family, putting a symbol or drawing for each family member on a blank sheet of white A4-size paper. Participants were also reminded that everybody's family is different and that sometimes it was not easy to represent them. While participants were drawing, the interviewer encouraged the participant to talk about who they are drawing (e.g., how would you describe that person's relationship to you?) and to think out loud when making their decisions about who to put on the map next and where to put them. When the initial map had been drawn the interviewer then asked whether there was anyone else the participant

wanted to include. The participant also was encouraged to review their map both verbally and visually by editing or redrawing their map. Thus, the aim of the family map exercise was not to establish a genealogical record, but to access a representation of the participant's psychosocial representation of their family in both visual and verbal form.

2.3. Data Preparation and Qualitative Analysis

The interviews were transcribed verbatim and prepared for analysis with any identifying information removed. Each hand-drawn family map was then transposed into a Microsoft Word document (matching size and shape proportionate to the original A4 size drawing). All the names and any identifying details on the family maps and interview extracts presented here have been changed to preserve anonymity, but otherwise wording and pictorial representations remain the same.

The interview transcripts were subjected to a process of narrative thematic analysis in relation to the family maps (Riessman 2008; Tasker and Delvoye 2018, in press). The order of placement of family members was noted as were the various lines, relational groupings of members, and any notable visual features. Each individual transcript was analyzed through the process of open coding: beginning initially on the section of the interview when the participant was drawing their family map and then spreading across the entire interview. In open-coding, participant's phrases were summarized initially using the key content and meaning words (thus prioritizing rich descriptive terms used by the participant). Concurrent with this process of summarizing, any interpretations or thoughts directly prompted by the data were added to the open-codes. When all four transcripts had been open-coded by the first author, the second author then reviewed the transcripts with each open code indicated alongside the relevant interview segment and made additions or amendments to enrich and refine the open codes. The next phase of analysis separated the open codes from each transcript and simultaneously reviewed the entire set of open codes across all four transcripts to sort these by similarity into groups (sub-themes). The sub-themes were then interpreted to form coherent themes generated inductively from transcript analysis. We then focused on the themes pertaining to the visual family map data and our specific research questions on the role of genetics and/or psychosocial markers in denoting family membership.

3. Results

Our themes are delineated below under their respective thematic subheadings: immediate family (the ones you care for); extended family (the need for people beyond the immediate family who know your family story); a genetic link is not enough for family membership, but does need to be recognized; the lack of a genetic connection may trouble family relationships (how can we best manage this?); family connection through the sharing of common family values and the gift of children's lives. As we indicate below in our description of each theme, the themes are represented to a greater or lesser extent in all four interview transcripts and family maps. As our analysis has been thematically focused across all four interviews we have not ordered our presentation of evidence below as a series of case studies. Instead, we have ordered the interview material presented under each theme to represent the subthemes that contributed to the theme.

3.1. Immediate Family (the Ones Who You Care For)

When the interviewees began to draw their maps, they drew themselves, their partners, and their children first, constituting a domestic group at the centre of each participant's map and at the heart of their stories (their immediate family). In each map the immediate family was akin to a nuclear family often separated by a boundary from other family members, as was evident in Ella and Jamie's drawing (Figure 1). In Figure 1 Ella has drawn herself and her husband Jamie and then a semi-circle around their daughter Charlotte and their two cats. Ella said: "Charlotte is the centre of our family universe and changed our life [. . .] now we are a family of three and we have two cats". Jamie then added "that would make it a family of five".

Ella's concept of a precious immediate family could also be observed in the maps and interview data produced by other participants too. When Judith started to draw her family map, she first put her children (Charlie and Amelia) and then her husband (Simon) and herself into "literally our immediate family" circle (Figure 2). Melissa described and drew her concept of family as a tree (Figure 3). Melissa and her husband (Richy) formed the trunk with their three children (Tammy, Rhys, David) placed in a line immediately underneath them in the branches, with her married daughter (Tammy) also placed next to her husband (Jack). Anne referred to her immediate family as "just us": her husband (Jim) and their three children (Albany, Tilly, Alma) who were distinct from 'true' family defined on the map by as Anne and her husband Jim's genetic relatives (Figure 4). Anne laughed as she explained her family map: "[the] solid line is [. . .] maybe like our true family, not immediate, 'cos immediate [family is] just us but erm-, like our real family".

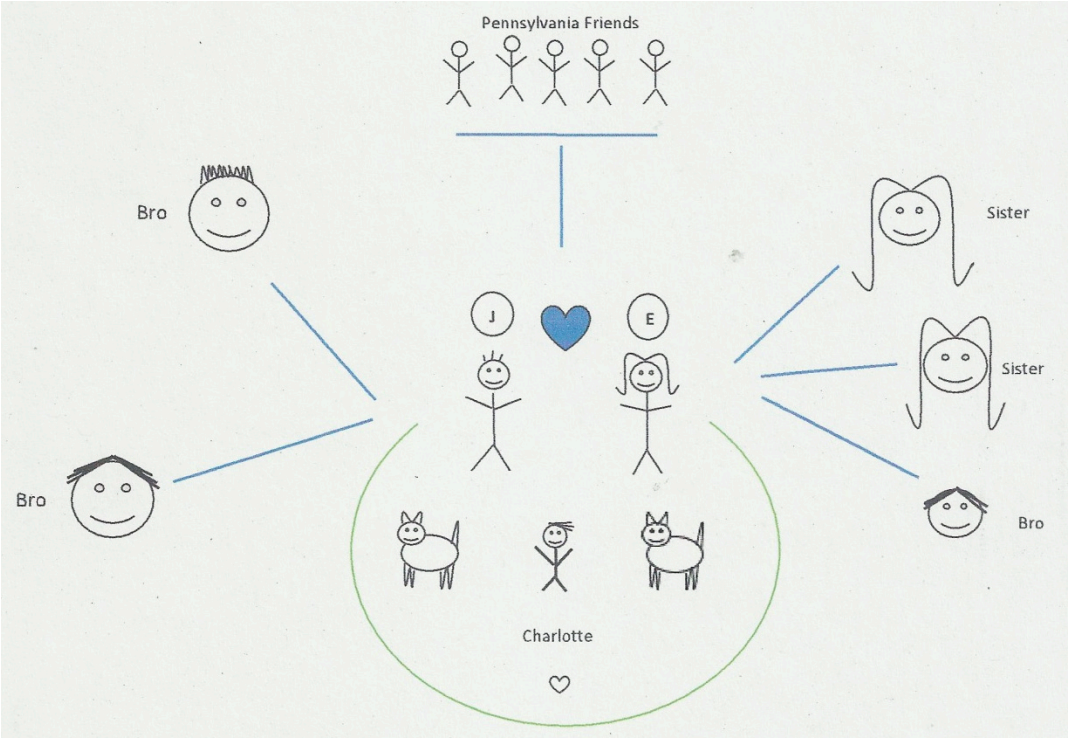

Figure 1. Ella and Jamie's family map.

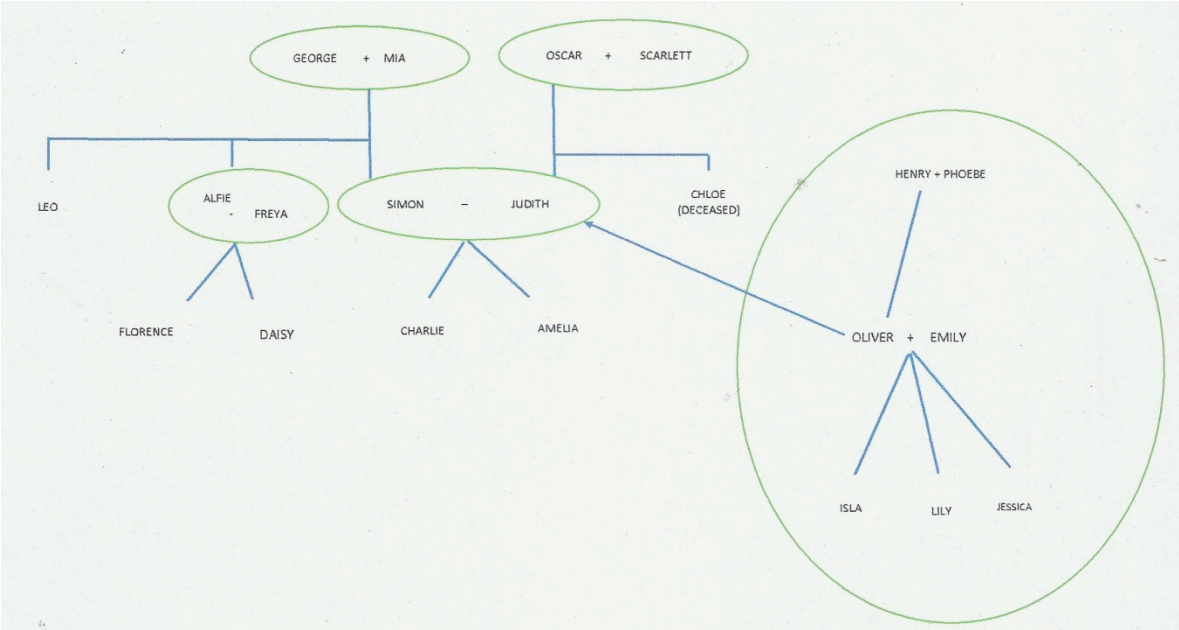

Figure 2. Judith's family map.

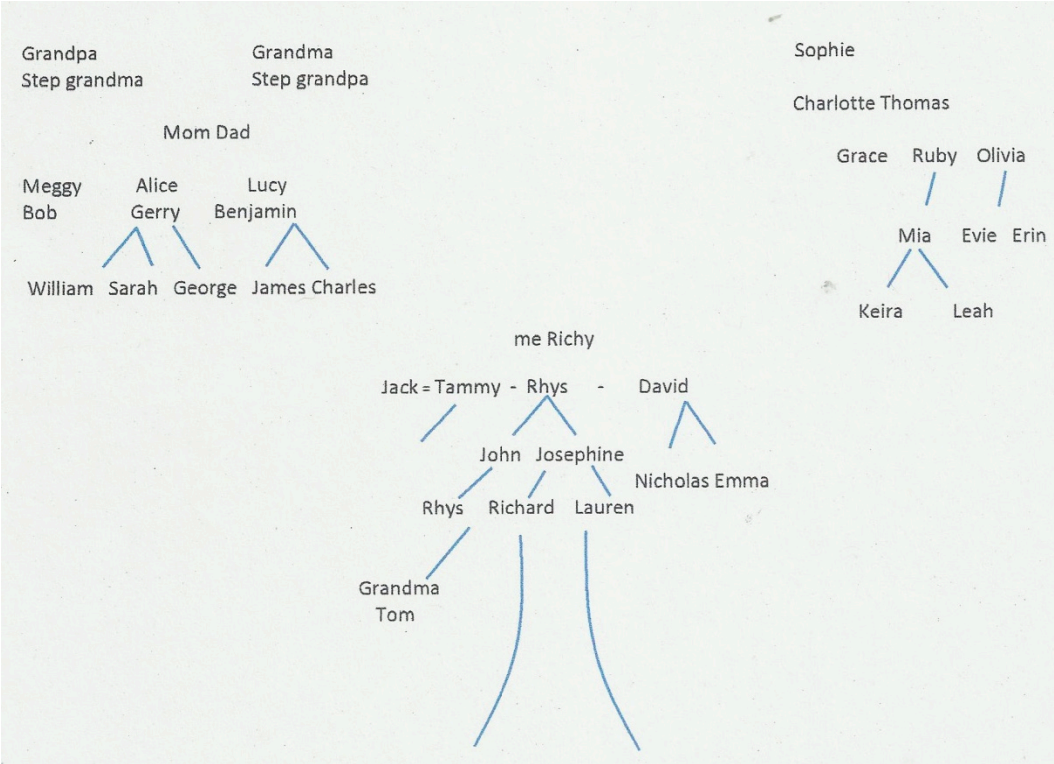

Figure 3. Melissa's family map.

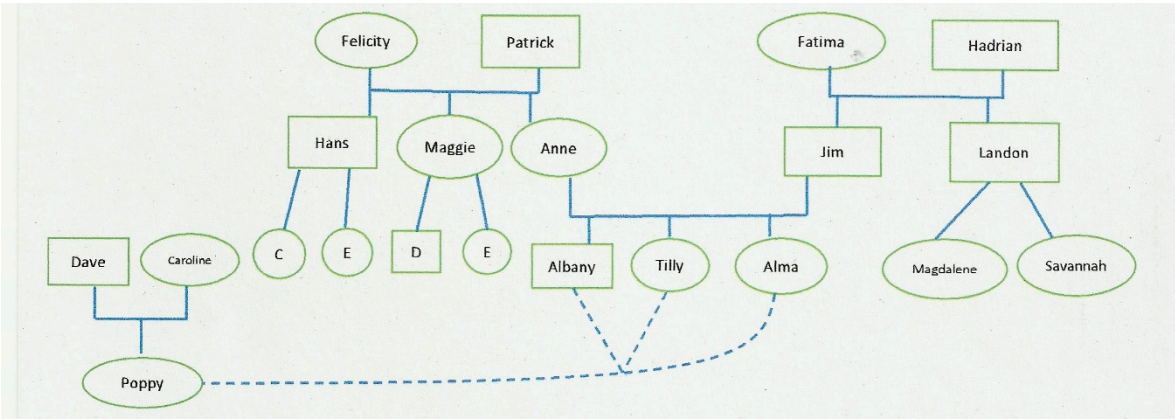

Figure 4. Anne's family map.

3.2. Extended Family: Generational Stakes and the Need for People Beyond Immediate Family Who Know Your Family Story

All the family maps drawn by our participants included not only immediate family, but also extended family, namely the siblings and parents of the participants, who fanned out around the centrally positioned hub of immediate family. Except for Ella and Jamie, who had both experienced their parents' deaths, participants included their parents on their family maps but family generations stopped here. Furthermore, none of the four family maps included participant's own uncles and aunts or cousins. Ella and Jamie depicted their own siblings but did not include or mention the partners or offspring of their siblings, whereas other participants did.

Ella and Jamie also were the only participants who included friends as family on their map. Ella explained that this was because friends "are our chosen family and they have taken my siblings' place since we moved in Pennsylvania". At another point in the interview Ella also explained that "we had to get a couple of letters of recommendation for the [embryo adoption] process [Interviewer: yeah] we needed a few people to like write us letters [Interviewer: okay] so they knew right away". Ella and Jamie talked about their friends as a group and they were drawn as a grouped block, without the detailed features that Ella gave to either her siblings or Jamie's brothers. In response to a question about how their view of their family had changed, Jamie simply said "family matters". Ella then expanded upon how their view of family had changed with the void left by the double bereavement she and Jamie had experienced with the loss of both sets of their parents:

> "Well with the loss of my parents, and then the loss of Jamie's parents, there was like a vacuum and it made us realize that we really are older parents. Because a lot of times when you talk to people that have kids [you realize] that grandparents are involved, and they help so, and we don't have that kind of help. So I think that our family maps have changed and the biological family has gotten smaller but they, our friend family, has gotten bigger."

The competing demands of strong narratives about family could be glimpsed through Jamie and Ella's account of who in their family needed to be told and why they needed to be told. Initially, the relayed commentary of Jamie's brothers loomed large in Jamie's account of fertility treatment. Here we noted Jamie's embarrassment about Ella not becoming pregnant and then his seemingly contradictory confusion about what needed to be said within his wider family about continuing the family line. As Jamie stated:

> "I felt it was kind of a private thing between the two of us and, erm, I kind of wanted to leave it like that, you know. When we were trying to get pregnant I was hearing comments from my brothers 'well obviously you're going to need help' [Interviewer: right] Well what does that mean? So at that point I thought: You know something this is our private life! And at this point with some people I felt like this could be a private thing between the three of us.

And erm-, there are a ton of people that do know about it and I love to tell the story, I think it's a great story."

With some hesitation Ella then explained how Jamie had reached his final uncomfortable position about "the ton of people" who knew about the embryo donation, despite wanting to keep this as "a private thing". Ella's account helped to explain why Jamie seemed to feel the need to be upbeat and positive regardless of his embarrassment with his brothers, almost as if Jamie was trying to convince himself, Ella, and the interviewer of the positive side. Ella said:

"At the beginning, erm, we were not going to tell anyone. [Interviewer: okay] and then through the adoption agency they told us that there were studies that showed that-, that erm-, you kind of needed to tell the child [. . .]. And Jamie accepted it and I accepted it and we realized at some point we were going to tell Charlotte".

Ella then immediately went on to talk about her own position regarding infertility and the type of ongoing relationships she had with her sisters. Here Ella focused on a different family-related narrative, but one which seemed equally as strong as Jamie's need to continue an unquestioned family line. Ella described her need to receive family support and the common interest she shared with her sisters in raising the next generation of their wider family:

"So at that point Jamie really wasn't-, wanting me to talk to my family about it [Interviewer: right] and I have a different relationship with my sisters and my brother than he has with his brothers [Interviewer: okay]. So I felt a little restricted by the fact that he didn't want me to tell them (.) and then finally I just said I really needed their support [Interviewer: okay]. And I talked to them about it. But it was kind of late in the game [Interviewer: okay, yeah]. After we had been going through fertility treatment for a long time [Interviewer: okay]. So I think it was confusing about who to tell and who not to tell".

Later on in the interview Ella said:

"I think my sisters were really excited for me, 'cos I think they thought that we weren't going to have children [Interviewer: okay]. And erm-, I think they were excited that we were planning to have a child [Interviewer: yeah]. So, for them they were really excited, and every time I went through something at the doctors I would be texting them and saying what she looked like, you know, and what her heart rate was and this and that [Interviewer: okay]. So they were very excited for me and for Jamie."

Anne included just her siblings and her husband Jim's siblings (none with partners) with each sibling depicted in a classic family tree formation with their children. Judith concentrated on accurately representing her husband's siblings: an elder brother without a partner and a second brother with a partner and two children. Judith also talked lovingly about her sister Chloe who had died of a serious illness whilst Judith was expecting her first child. Judith felt there was a close connection between her daughter Amelia and Chloe:

"Chloe knew that we were going through this process and was going through the final months of her life and she actually donated, you know, not a lot of money but some money to help towards the adoption costs. And that was part of her way of giving since she wasn't going to be around. And as my sister was facing the final days, and we were finalizing days for the first transfer, my sister was lamenting that she wasn't going to meet them and I said "well wait a minute, you're going to meet them first, 'cos you're going to cross in heaven. You'll get to meet our children before we even do, because they're waiting in heaven for us to be born". And so really that warmed her heart and helped ease her lamenting a bit about that."

3.3. A Genetic Link Is Not Enough for Family Membership, but This Does Need to Recognized

The position of the other parents who were interviewed was that a genetic link was not enough for family membership, but it did need to be recognized. Nevertheless, both Judith's and Melissa's views on the importance of a genetic link for denoting family membership were very different from those expressed by either Anne or Ella and Jamie. Judith and Melissa both had open relationships with their donor families, which were represented in their family maps (Figures 2 and 3 respectively). In contrast, Ella and Jamie's map did not include members of the donor family and Anne only partially linked the donor family to her family with a dotted line (Figure 4).

Melissa's family history was more complex than that presented by other participants. Melissa's family contained three "biological families": Tammy (Melissa's daughter from a domestic adoption) and Melissa's sons Rhys and David, who were conceived following two separate embryo adoptions. All three of Melissa's children had contact with their respective biological families. Melissa argued that contact with each biological family (via pictures, messages, and in person) was fundamental to each child's sense of identity as it gave "that whole sense of family history and similarity". When describing the occasion when she and her son Rhys met up with his donor family, Melissa said: "They have so much in common. It was really a cool thing to sit down and have dinner and [ask] 'what are you interested in?' [. . .] but like the dead-same exact things." Melissa's said that all three children's biological families "feel like family to me" but she said she did not place them on her family tree until she had met them (Figure 3).

Judith described the embryo donors and their relatives as genetic family, and indicated that the two families had a close relationship, which she indicated by adjacent placement on her family map (see Figure 2). Judith's family map had totally changed during her embryo donation pregnancy because of her sister's serious illness and subsequent death. The passing of her only sibling, whom Judith had been very close to, and the arrival of her first child meant Judith both: "lost a [family tree] branch, and gained a greater family branch". On her family map Judith has drawn a strong link between herself and donor family. In direct contrast to Anne's positioning of the donor family off to the side with a tenuous dotted line, Judith gave the donor family a prominent place next to her depiction of her deceased sister. The donor family was drawn immediately after Judith's finished drawing her immediate family and the donor family was drawn with generational detail to include genetic grandparents. Judith thought the donor couple was like an uncle and aunt for her children, and their children were seen as cousins. Judith described her children as being very close to their biological sisters. Indeed, Judith also argued that if other frozen embryos were adopted and developed from the same batch that had contained her son and daughter (and the donor family's offspring) then these new children would also be part of the same set of siblings.

Judith said she had learnt to manage and then accept her feelings about not being genetically related with her children: "I think again I went through it so quickly and there was so much going on like emotionally because [of] dealing with the loss of my only sibling." Also, Judith explained that for her the experience of pregnancy and giving birth to her child conceived via embryo donation created a "clear line of parentage" and also helped her to overcome the feeling that she might not have a right to parent her children. Judith contrasted what she saw as the certainty of embryo adoption with adoptive parenting and the uncertainty surrounding placement, if a birth parent changed their mind about the adoption:

> "I think getting to experience pregnancy was really the biggest reason why we wanted to pursue embryo adoption, erm, there was a clear line of parentage. So we both separately, before we got married, had friends going through traditional adoption and [some who were] in that process. I mean here I don't know how the laws are in the UK, but here in the US there is a certain time the parents had to like 'whoops I didn't realize!' they changed their mind, they call it the 'change the mind' kind of time period. [Interviewer: Okay] And parents would change their mind. In fact I had one friend because of her unique situation had the

> baby an entire year and they, the parents decided oh no we want the baby back. [Interviewer: Wow]. And I just knew in my heart I couldn't go through that. [Interviewer: Of course]. That would just break my heart."

Ella and Jamie both played down the importance of genetics in terms of family relationships, but in contrast highlighted the importance of genetics for the health and vitality of their daughter. In fact the healthy genetic contribution made by the donor embryo, plus the fact that neither of them had a genetic advantage by sharing their genetic heritage with their baby, made adopting an embryo an attractive route to parenthood. As Ella told the interviewer:

> "We decided you know what if we were going to get an egg [Interviewer: yeah] and use Jamie's sperm, then why don't we just get an adopted embryo and be that neither of us was, you know, participating in the genetic make-up, and we would have a fresh embryo. [Interviewer: okay] You know, like a fresh sleeve.

"Interviewer: Yeah, okay, so there's something about the equality of neither of you being the genetic parent?

> "Ella: Right, and plus, you know, I've been watching all the studies and it seems like not only maternal age but paternal age could have an impact on, erm, issues with autism and I felt like you know what let's be safe and get, erm, a baby that has a very young mother and a very young father. [Interviewer: okay] And then she'll be very healthy. [Interviewer: okay]. You won't have to worry about any of that during the pregnancy. [Interviewer: okay] Which was nice, which it was really nice not to have to worry about that."

The importance of knowing about genetics for health loomed large in Ella and Jamie's interview. Ella had told their health care providers about their daughter Charlotte's embryo donation heritage: "to get her care, so I feel like they should know". Despite his reservations about telling others about his daughter's origins, Jamie stressed the importance of telling his daughter about her genetic origins: "because I think it's extremely important. [. . .] after they [the adoption professionals] had told us different stories about different families and the impact that has on people, you know, I've realized. She needs to know the true story."

Nonetheless, Jamie also played down the importance of genetics marking family relationship as he argued that "the DNA might not be as big [a factor in creating family resemblance] as we think it is". Jamie then indicated that the absence of a genetic link with his daughter had troubled him previously, but this feeling had subsided because of the undoubted similarity between them: "You know, it did at the beginning, but now it is what it is, you know. [Interviewer: Yeah you're kind of used to it?] Believe it or not she does kind of look like the two of us [laughter]". Anne also emphasized the careful matching of physical characteristics between donors and recipients and thought that one of her daughters (Tilly) "looks almost exactly like me. The twins don't, but Tilly does, and all three of my kids don't look like Poppy the donor family daughter. Everyone comments about it all the time."

Although two recipient families had little contact with their donor family, both Ella and Jamie and also Anne could not ignore the presence of the donors in their lives. Ella and Jamie had never met the donor couple and had never had a contact with them outside of agency-mediated contact. It was clear that the donor family was not part of Ella and Jamie's life and they were not included in Ella's family map. Nonetheless, Ella conceded that the children of the donor couple (whom Ella named as "Charlotte's biological siblings") could be considered part of Ella and Jamie's family, if their daughter Charlotte wanted this when she was older. The absence of the donor family in their lives was justified by Ella and Jamie as a consequence of both the agency's hands-off approach to mediated contact between donors and recipients, and the donor couple withdrawing from contact. Ella attributed the donor couple withdrawing to them perhaps having some complex issues involving "double disclosure". That is to say that Ella and Jamie had received a batch of embryos from a double-donation, i.e., the batch of IVF embryos received had been created using a donor's eggs, not

the commissioning mother's eggs. Ella explained: "I didn't know if she was going to tell her children about whether, erm, [Interviewer: Okay] they used a donor's egg, so she had some issues with making it an open process". Nonetheless, the donor family's withdrawal from contact did accord with Ella and Jamie's desire not to have any intrusion into their parenting, and Ella and Jamie felt that it was sufficient that they had agreed to let Charlotte know "how she got here and who her parents are."

Anne said that she had initially wanted a "non-open donation". Furthermore, Anne still did not like the open-contact relationship, which had been set up largely upon the instigation of the donor couple. Anne said she had worried about their excessive involvement into her parenting:

> "My initial feelings on it were like with adoption that I didn't want anything to do with the donating family, because it just seemed better to keep it clean.
>
> "Interviewer: What was your fear around that?
>
> "Anne: that they would want to be involved in the children's lives, or that they would somehow try and take them away from us [laughter] so, erm, or that we would have to accommodate them somehow in our lives."

Nonetheless, Anne felt she had to represent the donor family on her family map despite her reservations. Graphically, Anne included the donor family in her map but offset to one side. Furthermore, Anne's children were only directly linked to Poppy, the donor family's daughter, and not directly linked to their genetic parents. Moreover, the line that connected Anne's children and Poppy was not a normal line, but was dotted or partial, quite unlike the solid line with which she connected her "true" or main extended family. Anne hesitantly explained:

> "The dotted line are people who are related to us somehow, but they're not actually a part of our like main family [Interviewer: okay] They're-, I don't know, auxiliary family. [laughter]. I wouldn't even call them family, but they're-, they're connected to us, they are connected to us somehow, but they're not part of our main family."

Anne also said that she thought of the donor family's child, Poppy, as the "natural sibling" of her children, like a niece, and connected Poppy with one dotted line that then branched off to each of Anne's children, thus emphasizing the link between genetic relatives. Anne thought of the donor family couple as good friends and regularly included them within the children's story book about a child from an embryo donor that she read to her twins and her daughter: "There's a story book we read, erm, and they talk about how their child was conceived as donor embryo". Anne also felt a sense of guilt about her success with embryo donation in relation to the donors: Anne said she had "three of their genetic material kids and they [the donors] have only one daughter". Anne knew that the donor family presented Anne's family to their daughter, Poppy, as adult friends of theirs who Poppy does not know ("she told me that she tells Poppy that we're like her dad's drinking buddy"). Furthermore, the donor mother has not told Poppy that Tilly, Anne's daughter, is in fact her genetic sibling. Anne then worried about Poppy's lack of knowledge: "I did voice my concern that Poppy might be mad [angry] if she finds out too late that she has these three, erm, donor conceived kids that are directly genetically blood linked to her. So I sort of mentioned it [to the donor family]."

3.4. The Lack of a Genetic Connection May Trouble Family Relationships—How Can We Best Manage This?

Despite Jamie's downplaying of the role of genetics in creating physical and personality resemblances within families, there were other indications that he was troubled by the lack of a genetic connection through having a child via embryo donation. Namely, Jamie conveyed that the lack of a genetic connection was information that needed to be carefully managed to avoid embarrassment. For Jamie telling someone that his child was born from an adopted embryo might be inviting the other person to think that "she is someone else's child". Consequently at points during the interview Jamie argued that it was best only to tell if there was a direct reason for telling someone about the embryo donation:

> "the rest of them [acquaintances, friends and family] don't know, erm-, in my mind do they need to know? [Interviewer: okay]. You know, you don't walk around with a shirt saying 'Oh by the way we've got an embryo adoption: it's somebody else's child!' It's a conversation at the right time in my mind when it comes up."

Anne also expressed her ambiguity about the absence of a genetic link between her and her embryo donated children. Sometimes Anne thought: "wait, she or he is not my genetic child". The same thought bothered Anne when anyone casually commented upon a physical resemblance between her and her children. Anne also still desired to have genetically related children with her husband and they were on yet another IVF cycle using their own gametes when Anne was interviewed. Nonetheless, Anne was adamant that she and her husband could never supplant their embryo-donated children with a genetically related child: "I think there's still like a sense of loss that I don't have genetic children but-, like I would never trade what I have now".

Each family used a specific name for their embryo donors, which reflected what the participants thought about the donors and how involved the donor family was in the participant's family life. Both Jamie and Ella, and also Anne, did not use the term parent for their child's genetic relatives. As Anne said:

> "it's kind of awkward but, erm, I think [the agency we went through] calls them genetic parents [but] they're not Tilly's parents so we don't call them parents [Interviewer: yeah]. We call them, erm-, the donor family couple like the donor family mum the donor family dad [Interviewer: yeah] and the donor family daughter."

In contrast, Judith and Melissa both referred to the embryo donors as their children's genetic parents. In fact Judith made a point of not referring to them as the donor family because she said she had a wonderful open relationship with them and she felt her children did too. When talking to their children both Judith and Melissa usually used first names when talking about the genetic parents and referred to their children's "sister" or "brother" in the donor family children. Nevertheless, Judith made a distinction when she referred to the genetic father's grandparents, who Judith thought were not grandparents.

3.5. Family Connection through the Sharing of Common Family Values and the Gift of Children's Lives

An underlying theme that flowed more or less strongly through all the interviews was the shared gift of children's lives, which were created and nurtured in various ways within a common set of values, which could be based on faith or shared ethnicity. Perhaps our identification of this thematic strand was not surprising in our sample, given the theme's congruence with the faith-based mission of the embryo adoption agency from which all four families were recruited. Clearly some families were more committed to a Christian pro-life viewpoint than were others. For example, the view that both donor and recipient families together enabled a child's life—through creating the embryonic person and then giving that person the crucial chance to develop—was most evident in Judith's narrative. Judith described the values and Christian purpose that she felt she shared with the donor family while undertaking the embryo transfer to achieve a pregnancy:

> "What was really cool by the way was the night before the transfer, 'cos Oliver and Emily are also Christians they called us, and we all prayed together for the transfer and that was just-, again there's been a lot of confirmations. And I'm skipping as far as why this was right for us, but that was one of those pivotal like yeah this is why this is why we chose this method. Erm-, . . . the transfer went beautifully."

Melissa mentioned her Christian values much less than did Judith in her interview, but Christian beliefs were clearly fundamental to how she thought about family and how embryo adoption was incorporated into her family concept. In describing her feelings at seeing the connection between her son Rhys and his genetic family Melissa was clearly moved as she added:

> "And I really was, erm, so grateful that they're Christian families with the same values, and so I feel like we're relatives and I trust them like I-, you know, they're-, yeah, yeah, I really trust them and I love how much they love Rhys and all of them are like really-, you know even the-, well Ron's mom, so Rhys's genetic Grandma [genetic father's mother]"

Anne's conversation featured her ethnic identity, which she also shared with the donor family, rather than her Christian beliefs. The ethnic identity that both families shared and the common family traditions stemming from this, such as celebrating children's birthdays across the two families in a similar way, contributed to a feeling of shared values within a wider sense of family. However, in other respects Anne felt somewhat isolated and on the margins of the wider Christian values "family" concept as fostered by the embryo adoption agency: "I don't participate very often [in agency activities] it's very, very Christian, so people are like, erm, prayers and God bless . . . we go to church on the weekends, but it's a little bit over the top for me". Because of her non-Christian religious identity, Ella possibly felt even more apart from the embryo adoption agency, and perhaps also from the donor family who had given her and Jamie embryos. Ella thought that when she and Jamie initially registered with the agency their profile had been set aside by some families with embryos to donate: "I felt like erm-, we were being judged by some of the families and I'm not Christian and I felt like there was some bias there, [...] and this is a Christian organization so I didn't like that part of it."

4. Discussion

Our in-depth interview data and family maps from four families have demonstrated interweaving, and sometimes competing, themes about what makes family membership when a child has a gestational connection and an unbroken history of growing up with their adoptive family. Whether or not a family relationship was entailed because of the genetic link between the donors and the child of embryo donation was a complex issue for recipient parents and they had found a variety of ways of including, or excluding, the donor family. The hand-drawn family maps vividly depicted how to a greater or lesser extent recipient parents subscribed to a broader conceptualization of family with donor family members grafted, or not grafted, onto their genealogical family tree.

Although more recent cohorts of parents using third-party reproduction to have a baby seem more likely than earlier cohorts to disclose to their children, most heterosexual parents of gamete-donated children have found it difficult to broach the subject of genetic origins with their children (Golombok 2015). Some parents of a child conceived through embryo donation in one UK sample seemed to be especially reluctant to disclose and existing research has suggested that few children know about their origins as they grow up (MacCallum and Keeley 2008). While the medical history advantages of disclosure are often emphasized, assisted-conception clinics have offered far less guidance on how to disclose and what the ramifications of disclosure might be for families. Our findings from our small sample of four families, who received a donated embryo via an agency brokered semi-open in-contact agreement with their embryo donors, appear quite different from MacCallum and Keeley's findings. In the four cases we sampled, parents with the youngest child had the clear intention to tell and the remaining three sets of parents had already told the story of embryo donation to their children, if not actually met the donor family. Thus, our findings seem closer to those found in studies of adopted children where some form of contact with at least some of the child's birth family is often stipulated at the start of the adoption and woven into adoptive family life, regardless of how difficult this may be (Jones and Hackett 2011; Neil et al. 2015).

One way of making sense of our analysis is to consider family as being formed upon three main dimensions: commitment from a shared history of the giving and receiving of care, gestation, and genetics. In families who have given birth to genetically related children and brought them up, these dimensions all point to sharing the same genealogical lineage. In adoptive families only the first dimension (history of care) contradicts the other two dimensions, but there is a more or less clear story to explain to the child and others in the wider adoptive family. However, for children from donated embryos the information from both the first and second dimension (history and gestation)

are congruent but family relationship is contradicted by the third dimension: parental awareness of an unshared, potentially invisible but ever present, genetic heritage that lurks psychologically if it is not acknowledged. In both Judith's and Melissa's interview descriptions, different ways had been found to resolve the conundrum of the three dimensions in families with an embryo-donated child, but in Anne's and Ella and Jamie's interviews active dilemmas based upon the three dimensions were evident.

Of the five parents we interviewed Melissa most often stressed genetic relatedness as the underlying theme that broadened family membership to include the donor family. Nonetheless, Melissa said she did not place her children's genetic relatives on her family tree until she had met them (implying that getting to know them in person was an important part of recognizing family membership). Meeting her son Rhys's genetic family had helped Melissa to understand why Rhys is as he is. Melissa's account therefore emphasized similar benefits from open contact embryo donation to those seen for adopted children, and indirectly their adoptive parents, of open adoption. Namely, the increased flow of information and contact prompted family communication and helped children as they grow up to answer questions of origin and identity (Von Korff and Grotevant 2011).

In Judith's interview, an understanding of the genetic connection was evident, but not emphasized in the way that it had been Melissa's account. Judith acknowledged and included the donor family as part of her family on her family map: in fact, the largest subsystem circle indicated on Judith's family map was drawn around the donor family subsystem. But Judith stressed that the donors' genetic connection with her children did not give them a parental connection; she was clear that she had parentage through gestation and giving birth. Instead, the family connection for Judith was mainly formed on the emotional supportive link between the two families, which in turn was founded upon a shared set of beliefs and values around both families giving and receiving the joint gift of children's lives. In other words, the sharing of embryos itself meant that the donor and adoptive families were bound by a common interest and shared religious family values in the embryo-donated children's lives and in the lives of the children from embryos that grew up with the donating couple. In Judith's case, the gift of the children's lives, and also the faith-based emotional support she received from the donor family at the distressing time of her close sister's death, had helped to cement a very special family connection. Melissa also mentioned that the Christian family values shared by her and the donors helped to make the donor family feel like relatives and contributed to Melissa's trust in Rhys's connection with the donor family. Thus, Melissa felt that Rhys and the donor family's children were cherished in the same way.

In two of our four interviews, we saw parents of embryo-donated children struggle on occasions with how to place a boundary around their family because the information from the three dimensions—the shared history of the giving and receiving of care, gestation, and genetics—was contradictory. For example, Ella and Jamie's solution to the contradictions between these dimensions was to downplay the troubling absence of a genetic connection between them and their daughter. No mention of the donor family was made when Ella drew their family map. Yet Ella and Jamie had resolved to tell their young daughter, Charlotte, about her genetic origins, because they agreed with the embryo adoption agency about the importance of knowing your genetic heritage for medical reasons. Having agreed with this principle it was then unthinkable not to tell Charlotte. Anne likewise was somewhat unresolved about the absence of a genetic underpinning to parentage and family membership. Also, like Ella and Jamie, Anne emphasized how much at least one of her children resembled her and how little any of her three children resembled the donor family's child. Anne drew a dotted or partial line, specifically between her three children and their genetic sibling, the donor family's child, to indicate a tenuous connection on her family map; no direct connection was indicated between Anne's family and the gamete donors. The difficulties of integrating the adopted child's birth family connection with adoptive parents' narratives of closure on previous attempts to have children and making a new start have been noted in other studies of children adopted from the social care system (Jones and Hackett 2011; Tasker and Wood 2016). The dilemma of genetic heritage was evident

in our study of families with children from embryo donation, albeit played out in a different way to the dilemmas faced by adoptive parents in traditional adoption who lack both an early life and genetic connection with their child.

One intriguing narrative thread underpinning family relationships in our families with a child conceived by gamete donation was the recognition of the importance of sibling relationships. Freeman et al. (2009) noted that most of the parents of children conceived via donor gametes who were motivated to consult the Donor Sibling Registry did so because of their desire to find donor siblings for their offspring. The importance of cross-generational sibling connections in the minds of the families we interviewed also coincides with the emphasis in UK social work on keeping groups of adopted siblings together or at least in touch with their genetic siblings (Dance and Farmer 2014).

In our study, difficult narrative threads involving extended family and concerning family continuity and future generations could be seen competing in the interviews and positioned on the family maps. On one side Jamie experienced the pressure of continuing a "pure" family line and feared being open with his brothers who had taunted him. On the other side, Jamie's wife Ella feared the void of being unable to connect with her sisters because she could not share in making the next generation of family. Positioning himself as a progenitor, Jamie clearly experienced expectations and pressures from his brothers to have children: could Jamie's children continue the family line if they were not genetically his? Had Jamie let the family down if he could not do this himself? No less pressing than Jamie's concerns, were Ella's feelings about keeping secrets and so being cut off from family support. Ella was desperate to share her anxiety and disappointments about fertility with her sisters, whom she knew would support her because of their shared family history and stake in future generations. Much of the emotional pain of fertility treatment for the couple was because having children concerned not only the want-to-be parents but also their wider families. Thus, one dilemma of fertility treatment with donated gametes is that this touches upon each prospective parent's connections with wider discourses about what makes family through the generation. Is family denoted by shared genetics, or a shared history and commitment to socioemotional support through the generations? In traditional adoption it would be extremely difficult to keep adoption completely secret from extended adoptive family members. Much of the family work that adoptive parents do both prior to and after adoption concerns reconciling extended family members' family scripts with those the adoptive child may hold (Tasker and Wood 2016). Considering the findings from our study, we suggest tentatively that examining inter- and intra-generational family scripts in relation to extended families may be useful for those undertaking parenthood via embryo donation too.

5. Conclusions

Our small in-depth study focused on parents who had a child using embryo donation in a context similar yet distinct from adoption: with donor couples specifically selecting a recipient couple to donate their embryo to within an agency-brokered agreement in which both couples are in contact with each other. All the parents in our study either were already open with their child or intended to tell their child about their embryo donation origins. Nonetheless, the genogram technique of family map making showed that some recipient families found it easier than others to form a connection with the donor family or integrate the donor family into their concept of family, while others still struggled with family boundaries.

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References

Blyth, Eric, Steve Lui, and Lucy Frith. 2018. Relationships and boundaries between provider and recipient families following embryo adoption. *Families, Relationships and Societies*. [CrossRef]

Dance, Cherilyn, and Elaine Farmer. 2014. Changing lives and changing minds: The experiences of adoptive parents from application to approval. *Adoption & Fostering* 38: 101–14. [CrossRef]

Freeman, Tabitha, Vasanti Jadva, Wendy Kramer, and Susan Golombok. 2009. Gamete donation: Parents' experiences of searching for their child's donor siblings and donor. *Human Reproduction* 24: 505–16. [CrossRef] [PubMed]

Frith, Lucy, and Eric Blyth. 2013. They can't have my embryo: The ethics of conditional embryo donation. *Bioethics* 27: 317–24. [CrossRef] [PubMed]

Goedeke, Sonja, Ken Daniels, Mark Thorpe, and Elizabeth Du Preez. 2015. Building extended families through embryo donation: The experiences of donors and recipients. *Human Reproduction* 30: 2340–50. [CrossRef] [PubMed]

Golombok, Susan. 2015. *Modern Families: Parents and Children in New Family Forms*. Cambridge: Cambridge University Press.

Grotevant, Harold. D., Ruth G. McRoy, Gretchen M. Wrobel, and Susan Ayers-Lopez. 2013. Contact Between Adoptive and Birth Families: Perspectives from the Minnesota/Texas Adoption Research Project. *Child Development Perspectives* 7: 193–98. [CrossRef] [PubMed]

HFEA. 2004. The Human Fertilisation and Embryology Authority (Disclosure of Donor Information) Regulations 2004. Available online: http://www.legislation.gov.uk/uksi/2004/1511/contents/made (accessed on 13 January 2012).

Jones, Chris, and Simon Hackett. 2011. The Role of 'Family Practices' and 'Displays of Family' in the Creation of Adoptive Kinship. *British Journal of Social Work* 41: 40–56. [CrossRef]

Kelly, Fiona. 2015. Your Questions Answered on Donor Conception and IVF: Q8. Who Goes on the Birth Certificate When Using a Sperm or Egg Donor? And What about If the Couple Is Same-Sex? Available online: http://theconversation.com/your-questions-answered-on-donor-conception-and-ivf-45715#a_8 (accessed on 17 September 2018).

Kretsedemas, Philip. 2017. What Is Genealogy? Introduction to the Inaugural Issue of Genealogy. *Genealogy* 1: 9. [CrossRef]

MacCallum, Fiona, and Susan Golombok. 2007. Embryo donation families: Mothers' decisions regarding disclosure of donor conception. *Human Reproduction* 22: 2888–95. [CrossRef] [PubMed]

MacCallum, Fiona, and Sarah Keeley. 2008. Embryo donation families: A follow-up in middle childhood. *Journal of Family Psychology* 22: 799–808. [CrossRef] [PubMed]

MacCallum, Fiona, and Sarah Keeley. 2012. Disclosure patterns of embryo donation mothers compared with adoption and IVF. *Reproductive Biomedicine Online* 24: 745–48. [CrossRef] [PubMed]

MacCallum, Fiona, Susan Golombok, and Peter Brinsden. 2007. Parenting and child development in families with a child conceived through embryo donation. *Journal of Family Psychology* 21: 278–87. [CrossRef] [PubMed]

McGoldrick, Monica R., Randy Gerson, and Sueli Petry. 2008. *Genograms Assessments and Interventions*. New York: Norton.

Mellish, Laura, Sarah Jennings, Fiona Tasker, Michael Lamb, and Susan Golombok. 2013. *Gay, Lesbian and Heterosexual Adoptive Families: Family Relationships, Child Adjustment and Adopters' Experiences*. London: British Association for Adoption & Fostering.

Milewski-Hertlein, Katherine A. 2001. The use of a socially constructed genogram in clinical practice. *The American Journal of Family Therapy* 29: 23–38. [CrossRef]

Millbank, Jenni, Eloise Chandler, Isabel Karpin, and Anita Stuhmcke. 2013. Embryo donation for reproductive use in Australia. *Journal of Law & Medicine* 20: 789–810.

Millbank, Jenni, Anita Stuhmcke, and Isabel Karpin. 2017. Embryo donation and understanding of kinship: The impact of law and policy. *Human Reproduction* 32: 133–38. [CrossRef] [PubMed]

Nash, Catherine. 2017. Genealogical Relatedness: Geographies of Shared Descent and Difference. *Genealogy* 1: 7. [CrossRef]

Neil, Elsbeth, Mary Beek, and Emma Ward. 2015. *Contact after Adoption: A Longitudinal Study of Post-Adoption Contact Arrangements*. London: CoramBAAF.

Prag, Patrick, and Melinda C. Mills. 2017. Assisted reproductive technology in Europe. Usage and regulation in the context of cross-border reproductive care. In *Childlessness in Europe: Contexts, Causes, and Consequences (Demographic Research Monographs)*. Edited by Michaela Kreyenfeld and Dirk Konietzka. New York: Springer, pp. 289–312.

Provoost, Veerle, Guido Pennings, Petra De Sutter, Jan Gerris, Anneleen Van de Velde, Evi De Lissnyder, and Marc Dhont. 2009. Infertility patients' beliefs about their embryos and their disposition preferences. *Human Reproduction* 24: 896–905. [CrossRef] [PubMed]

Rempel, Gwen R., Anne Neufeld, and Kaysi E. Kushner. 2007. Interactive use of genograms and ecomaps in family caregiving research. *Journal of Family Nursing* 13: 403–19. [CrossRef] [PubMed]

Riessman, Catherine K. 2008. *Narrative Methods for the Human Sciences*. London: Sage.

Scodari, Christine. 2016. Recuperating ethnic identity through critical genealogy. *Journal of Multidisciplinary Research* 8: 11–23.

Smith, Amy M. 2017. Family Genealogy and Family Communication: Finding Common Ground. *Genealogy* 1: 6. [CrossRef]

Soderstrom-Anttila, Viveca, Tuija Foudila, Ulla-Ritta Ripatti, and Rita Siegberg. 2001. Embryo donation: Outcome and attitudes among embryo donors and recipients. *Human Reproduction* 16: 1120–28. [CrossRef] [PubMed]

Swainson, Mary, and Fiona Tasker. 2005. Genograms redrawn: Lesbian couples define their families. *Journal of GLBT Family Studies* 1: 3–27. [CrossRef]

Tasker, Fiona, and Marie Delvoye. 2018. Maps of family relationships drawn by women engaged in bisexual motherhood: Defining family membership. *Journal of Family Issues*. in press.

Tasker, Fiona, and Julia Granville. 2011. Children's views of family relationships in lesbian-led families. *Journal of GLBT Family Studies* 7: 182–99. [CrossRef]

Tasker, Fiona, and Sally Wood. 2016. The transition into adoptive parenthood: Adoption as a process of continued unsafe uncertainty when family scripts collide. *Clinical Child Psychology & Psychiatry* 21: 520–35. [CrossRef]

Tasker, Fiona, Maeve Malley, and Pedro A. Costa. 2018. *Family Mapping Exercises (FMEs) for Adults and Children in LGBTQ-Parented Families*, 2nd ed. The Therapist's Notebook for Sexual and Gender Identity Diverse Clients: Homework, Handouts, and Activities for Use in Counseling, Training, and Psychotherapy. Edited by J. Whitman and C. Boyd. New York: Harrington Park Press.

Taylor-Coleman, Jasmine. 2016. The Americans who 'Adopt' Other People's Embryos. *BBC News*; Tennessee, July 18. Available online: https://www.bbc.co.uk/news/magazine-36450328 (accessed on 7 June 2018).

Triseliotis, John. 2011. The current state of post-adoption contact. *Educational & Child Psychology* 28: 9–19.

Trounson, Alan, John Leeton, Mandy Besanko, Carl Wood, and Angelo Conti. 1983. Pregnancy established in an infertile patient after transfer of a donated embryo fertilised in vitro. *British Medical Journal* 286: 835–38. [CrossRef] [PubMed]

Von Korff, Lynn, and Harold D. Grotevant. 2011. Contact in Adoption and Adoptive Identity Formation: The Mediating Role of Family Conversation. *Journal of Family Psychology* 25: 393–401. [CrossRef] [PubMed]

Weeks, Jeffrey, Brian Heaphy, and Catherine Donovan. 2001. *Same Sex Intimacies: Families of Choice and other Life Experiments*. London: Routledge.

Weston, Kath. 1991. *Families We Choose: Lesbians, Gays, Kinship*. New York: Columbia University Press.

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