

# Current Views on Creating Families: Adoption, Assisted Reproduction and Family Relationships

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Running Head: Current Views on Creating Families

Current Views on Creating Families: Adoption, Assisted  
Reproduction and Family Relationships

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## Abstract

The purpose of this study was to explore young adults' views on building their future families; methods of having children including adoption, in vitro fertilization (IVF), donor insemination, egg donation, and surrogacy; disclosure of these methods to children; and the importance of children's contact with extended family. The sample consisted of 82 Boston College students, 41 males and 41 females, with a mean age of 20.67 years. Participants completed a questionnaire and an open-ended interview. The majority of the participants expected to have a life-long partner, raise at least one child, and help their children build relationships with extended relatives. Males and females did not differ on most questions; however females reported thinking about their future families more often than did males ( $p = .01$ ), and females expected to start their families earlier than did males ( $p = .02$ ). Participants were more open to adoption than to assisted reproduction technology (ART). IVF was the most preferred among the methods of ART ( $p < .001$ ). Participants reported they would be most likely to disclose information to their child had they used adoption or ART and were the genetic parent. Some participants emphasized the importance of disclose to a child had they used ART and were *not* the genetic parents; approximately one-fourth of participants affirmed that a child has a right to know. Participants reported it would be easier to answer their children's questions about adoption or ART than to initiate a discussion on these topics with their children ( $p < .001$ ). The majority of participants reported that it was important to help their children build connections with extended family and they planned to accomplish this through visiting and preserving family traditions. The findings provide insight into young adults' expectations for creating their families.

## Introduction

This study explores issues surrounding the rapidly changing structure of the modern family, focusing on families created via adoption or assisted reproduction technology (ART). Advances in reproductive technology have made it possible for many different kinds of people to have children, including heterosexual couples with fertility problems, same-sex couples, and single parents. By furthering our understanding of the use of ART in families and its effects on family relationships, our society can better accommodate the increasing diversity of families who may use these techniques. This section will discuss the biological and social roles of parenthood, introduce several methods of ART, explore the role of the extended family and contrast family structure with family process.

### *Parenthood as a Biological and a Social Role*

Parenthood today must be defined as both a biological and a social role. As the prevalence of families using ART increases, more non-biological parents will be directly involved in childrearing. Essentially, to argue whether parenthood is a biological or a social role is to revive the nature vs. nurture debate. Children will certainly possess some traits of their biological parents but at the same time, their development will be shaped by their relationship with their social parents who raise, teach, and care for them.

The belief that a genetic connection strengthens the bond between parent and child is not uncommon. It would follow from this belief that non-biological mothers and fathers would be inferior in some way. Golombok, Cook, Bish, and Murray (1995) explored this issue by conducting comparative studies of families created by in-vitro fertilization (IVF), donor insemination, adoption, and natural conception. They found that children conceived through assisted reproduction did not experience more cognitive, emotional, or behavioral problems than those that were conceived naturally. The authors did find a higher quality of

parenting among ART families; these parents displayed more warmth and emotional involvement, and spent more time interacting with their children. The difference in involvement between the two groups was especially noticeable among the fathers. The authors concluded that the emotional and financial hardships that accompany the use of ART strengthen one's commitment to parenthood and enhance one's ability to be a good parent. They argue that the social role of the parent takes precedence over the biological role because it has a greater ability to affect the child's well-being. Thus, the role of the non-biological parent in a couple who have used ART should not be viewed as inferior because the nature of the parent-child relationship is a more important factor than the genetic tie between parent and child.

### *Assisted Reproduction*

Today, many options are available for people who want to raise children but, for various medical and social reasons, cannot have them without assistance. Cooper and Glaser (1998) discussed several ways of having children, including the four ART methods that are discussed in the present study. The first method, in vitro fertilization (IVF) first resulted in a successful birth in 1978. IVF involves the combination of a sperm and egg outside of the woman's body in a Petri dish. The embryo is then inserted back inside the woman, and she carries the child to term. This method allows for both parents in a heterosexual couple to be genetically related to their child if their gametes are healthy. Alternately, the sperm, the egg, or both gametes could be received from donors. Cooper and Glaser describe this method as the "cornerstone of the new reproductive technologies" because IVF made it possible for the genetic and gestational components of motherhood to be separated. In other words, two different women could perform the role of "mother:" one could provide the egg and be genetically related to the child, and the other could carry and give birth to the child. In fact,

IVF has made it possible for a child to have as many as five parents: an egg donor, a sperm donor, a surrogate or birthmother, and the two social parents who will raise the child (Einwohner, 1989).

Two other methods of ART discussed in the present study are donor insemination and egg donation. In the former, a woman is artificially inseminated with a donor's sperm. According to Cooper and Glaser (1998), this method, when applied to heterosexual couples in which the man has a fertility problem, is not new. They discuss how donor insemination has a historical association with shame for the male, but perhaps these notions are changing as genetic relatedness is becoming less essential to the definition of a parent. In recent times, donor insemination has been used by single women and lesbian couples who are choosing to become parents (Flaks, Ficher, Masterpasqua, & Joseph, 1995).

Egg donation is a more complicated process because it necessitates IVF of the donated egg with the sperm. This method allows both the man and woman in a heterosexual couple to make a biological contribution to their child: the father contributes genetic material through his sperm, and the mother gestates and gives birth to the baby (Cooper & Glaser, 1998). In comparison to donor insemination, egg donation may provide both parents with a greater feeling of investment in their child. Any donation method that creates a family with one biological and one non-biological parent can be potentially problematic, however, if the couple's relationship suffers due to a perceived inequality in parental status.

Surrogate motherhood involves a woman intentionally carrying and giving birth to a child that she will relinquish to be raised by other parents. In some cases the surrogacy arrangement would involve the surrogate signing a contract to turn over the child and the parents-to-be agreeing to pay the surrogate for carrying their child. Whether a contract signed by a surrogate mother truly can be legally binding, should she change her mind and

want to keep the baby she has carried, is a highly controversial issue (Shanley, 2001). Other parents will choose a surrogate mother who is a relative or close friend, which may reduce the risk of legal battles over the child. Both partners in a heterosexual couple can contribute gametes to the surrogate mother via IVF; thus, both parents would have a genetic link to the child (Einwohner, 1989). Alternately, the surrogate mother can be artificially inseminated and would be genetic mother of the child. In addition to helping heterosexual couples, surrogate motherhood can also benefit single men and gay male couples who desire a genetic connection to their children.

### *Extended Family*

At a time when the nuclear family is experiencing revolutionary changes, how are relationships with the extended family affected? One criticism often aimed at single-parents and at gay and lesbian parents is that they will not provide their children with access to a role model of the opposite sex. Being raised in a single-parent household is not correlated with child behavior problems and maladjustment, however, as long as poverty is eliminated as a factor (Chan, Raboy, & Patterson, 1998). These findings suggest that there will not be negative outcomes on children that are directly attributable to the absence of a residential father or mother. An additional question is whether children of homosexual parents will be deprived of relationships with their grandparents, aunts, and uncles because the parents' sexual orientation will cause them to be rejected and estranged by their extended family. Patterson, Hurt, and Mason (1998) studied children raised by lesbian mothers and their contact with grandparents and other adults who could act as potential role models. Nearly all children had at least occasional contact with their grandparents and more than half of the children spent time with grandparents on a monthly basis. The majority of the children had contact with an adult male friend of the family. These findings suggest that children raised

by lesbian mothers are not typically estranged from grandparents and denied access to a male role model. These children, like those raised by heterosexual parents, appear to grow up within a network of support and care.

### *Family Structure vs. Family Process*

Children's well-being and psychosocial adjustment cannot be linked directly to the sexual orientation of their parents, to their biological relatedness to their parents, or to the number of parents that actually raise them. The question remains, then, what *does* influence children's psychosocial development? Chan et al. (1998) examined the relationships among family structure, family process, and the psychological adjustment of children. Family structure refers to the number of parents in a family, their genders, sexual orientation, marital status, and biological relatedness to the children. Family process describes the nature and quality of the relationships among family members.

Chan et al. (1998) conducted a study comparing heterosexual mothers with lesbian mothers and single mothers with parental couples. They controlled for the possible effects of biological relatedness by only including children who were conceived via donor insemination; thus, all children were related to only one parent. The researchers found no main effects of sexual orientation or parental relationship status on the children's psychosocial adjustment. Children's behavior problems were correlated with reports of parental stress, inter-parental conflict, and relationship dissatisfaction. The authors concluded that family process is a more important influence on children than family structure is.

### *The Present Study*

The present study explores college students' views on different ways of creating families and their expectations for their own future families. College students are on the



brink of adulthood; soon they might be making important decisions about building their own families. An exploration of the thoughts of college students could provide valuable insight into how the development of ART has revolutionized and expanded people's concept of the modern family.

This study intends to describe gender similarities and differences for these views and expectations. Females and males may differ in their expectations for and views on family formation. In addition, participants who are homosexual or bisexual are of interest because their perspectives on adoption and ART may be influenced by the fact that, if they want children, they will need to consider these alternative methods.

The study will focus upon four major topics: expectations for one's future family, attitudes toward adoption and ART, disclosure of these methods to children and other family members, and relationships with extended family. Expectations for future families will be assessed, including expectations for a partner, expectations for a child, expected timing of family building in the life course, and salience of thoughts about future families. Attitudes toward adoption and four methods of ART (IVF, donor insemination, egg donation, and surrogate motherhood) will be assessed. Attitudes toward disclosure of adoption and ART to the child and to other family members will be assessed. The importance of children's relationships with grandparents and extended family will be assessed.

## Method

### *Participants*

The sample consisted of 82 Boston College students, 41 females and 41 males, recruited via e-mail messages sent to the listserves of campus organizations and flyers distributed at club meetings. Organizations and numbers of participants from each are listed in Appendix A. The participation rate cannot be calculated precisely because the listserves

and meetings reached large, overlapping groups of students. A conservative estimate of participation rate is 10%, which is low but expected given students' schedules and obligations. The sample is a volunteer sample and is not representative of college students or young adults generally. Boston College is a Jesuit, Catholic institution and approximately 75% of the student body is Catholic.

The participants' ages ranged from 19 to 22 years ( $M = 20.67$  years,  $SD = .903$ .) Demographic characteristics are presented in Table 1. The majority of the participants were Caucasian (84.1%), heterosexual (84.1%), and in their senior year, (52.4%). Freshmen were excluded from this sample to reduce the likelihood that participants would be younger than 18 years. The majority of participants were raised in two-parent families (89%) with their biological mothers (95.1%) and fathers (87.8%).

This study was reviewed and approved by the Human Participants Committee of the Boston College Psychology Department for the protection of research participants.

Table 1

*Sample Characteristics*

| <u>Demographic Variable</u> | <u>Frequency</u> | <u>Percent</u> |
|-----------------------------|------------------|----------------|
| Ethnicity                   |                  |                |
| White                       | 69               | 84.1           |
| Asian                       | 11               | 13.4           |
| African American            | 1                | 1.2            |
| Latino                      | 1                | 1.2            |

## Sexual Orientation

|              |    |      |
|--------------|----|------|
| Heterosexual | 69 | 84.1 |
| Homosexual   | 5  | 6.1  |
| Bisexual     | 8  | 9.8  |

## Year

|           |    |      |
|-----------|----|------|
| Senior    | 43 | 52.4 |
| Junior    | 23 | 28   |
| Sophomore | 16 | 19.5 |

## Mother's Relationship

|             |    |      |
|-------------|----|------|
| Biological  | 78 | 95.1 |
| Adoptive    | 4  | 4.9  |
| Step-mother | -  | -    |
| Other       | -  | -    |

## Father's Relationship

|             |    |      |
|-------------|----|------|
| Biological  | 72 | 87.8 |
| Adoptive    | 4  | 4.9  |
| Step-father | 3  | 3.7  |
| Other       | 3  | 3.7  |

*Measures*

The four main questions of this study were assessed using a questionnaire and an open-ended interview, both of which were administered in one individual session. Both the questionnaire and interview were designed for this study, based on previous research. These measures are described below and are presented in full in Appendix B (questionnaire) and Appendix C (interview).

*Questionnaire.* The two-part questionnaire began with standard demographic items on age, gender, year in college, and family structure. The next seven items (3-9 in Appendix

B) assessed additional background characteristics of the sample, including closeness to extended family, involvement in romantic relationships, sexual orientation, and experience caring for children. The remainder of the questionnaire contained items that correspond to the four main research questions.

Views on family building were assessed by 11 items (10-20 in Appendix B). Seven items (10, 11, 13, 14, and 18-20 in Appendix B) were combined to form a scale, Expectations for Future Families, which measured how strongly participants expected and wanted to have a life-long partner and children in the future. All items had 5-point Likert type response scales ranging from *1 = strongly disagree* to *5 = strongly agree*. Some items (14, 18, and 19 in Appendix B) were reverse-coded so that a higher score on all items would indicate a greater expectation and desire for a partner and children. Cronbach's alpha for this seven-item scale was .78. Other items (15-17 in appendix B) in this section assessed expectations for timing of family events in the life course. Participants were asked to estimate the youngest age at which they would make a life-long commitment to a partner, the youngest and oldest ages at which they would begin to raise children, and the least and greatest number of children they expected to raise.

Attitudes toward adoption and ART were assessed by 9 items (21A-E, 22-25 in Appendix B). Prior to the administration of this second part of the questionnaire, the interviewer explained adoption and the ART methods of IVF, donor insemination, egg donation, and surrogate motherhood to each participant. The text of the interviewer's explanation is included in Appendix D. Participants were asked to rate their openness to five different methods: adoption, IVF, donor insemination, egg donation, and surrogate motherhood on a 5-point Likert type scale ranging from *1 = not open* to *5 = very open*. In addition, the participants were asked to select which method they would prefer to use in

different situations. They were offered the following four choices: adoption, ART where the participant *would* be genetically related to the child, ART where the participant *would not* be genetically related to the child, and not having any children. Finally, participants were asked how strongly they agree or disagree with the statement that a non-biological parent can be as effective, supportive, and loving as a biological parent.

Disclosure to children and family about adoption and ART was assessed by nine items, (26-35 in Appendix B). Items assessed whether participants would answer their children's questions, initiate discussions with their children, and be open with their parents or their partner's parents in three different situations: adoption, ART where the participant *would* be genetically related to the child, and ART where the participant *would not* be genetically related to the child. All items had 5-point Likert type response scales ranging from *1 = strongly disagree* to *5 = strongly agree*.

Importance of children's contact with extended family was assessed by three items, (35-37 in Appendix B). Items assessed expectations for partners' and children's contact with extended family on 5-point Likert-type response scales ranging from *1 = strongly disagree* to *5 = strongly agree*.

*Interview: Open-Ended Questions.* The interview questions are included in Appendix C. Eight open-ended questions with sub-parts assessed participants' reasons for expecting to have or not have children, attitudes toward adoption and ART, views on disclosure of these methods, and views on the importance of relationships with extended family for children.

### *Procedure*

The questionnaire and interview were administered in individual sessions in a university lab room. The principal researcher was trained in interview techniques and conducted all sessions. Participants were told the purpose of the study was to explore their

views on different ways of having children and thoughts about their own future families. Participants signed an informed consent document. Each participant's name and telephone number were recorded and entered into a raffle for \$50 as an incentive for participation. (The raffle winner was selected in a random, witnessed drawing following the conclusion of data collection, and was mailed a check for \$50.)

Participants completed the questionnaire with the interviewer present and available to answer questions. The questionnaire was administered in two parts to allow the interviewer to explain the methods of ART and answer any questions before the participants completed the items assessing their views on ART. Explanations were brief and focused on the process and the possibilities for genetic relatedness between parent and child. Each participant received the same explanations and was given five note cards summarizing the methods, which the participant kept for the duration of the session. The interviewer emphasized to each participant that a variety of people can use these methods including heterosexual couples, same-sex couples, single women, and single men.

The interview began after the completion of the questionnaire; each interview was audio-taped. Following the interview, the interviewer gave each participant a debriefing form, which included the four research questions and references. The interviewer explained the purpose of the study and offered to answer any questions. The interviewer employed a snow-balling technique for additional recruitment. (Two of the 82 participants were recruited in this manner.) Sessions lasted for approximately 40 minutes, with a range from 30 to 55 minutes. Following data collection the audio-tapes from the interviews were transcribed and coded by four independent coders. Coder agreement (number of agreements/number of agreements + disagreements) was calculated at 87%. Disagreements were resolved by discussion.



## Results

Results are reported in six sections. Background information is presented first. Results for the major questions of the study, expectations for future families, attitudes toward adoption and ART, disclosure of these methods, and importance of relationships with extended family, are presented in the next four sections. Finally, exploratory analyses of sexual orientation are presented.

Preliminary analyses for gender differences were conducted for all questionnaire items. Because few gender differences were found, findings are presented for the sample as a whole unless otherwise noted. Results of the open-ended questions are not presented in this paper, except in the section on relationships with extended family.

### *Background Information*

Of the 82 participants, 32 (39%) were currently in an exclusive romantic relationship with a person of the opposite sex, and 2 were currently in an exclusive romantic relationship with a person of the same sex. The length of current heterosexual relationships ranged from 1 month to 48 months ( $M = 15$  months,  $SD = 15.2$ ), and the two current homosexual relationships had lasted 6 months and 30 months respectively. Nearly all of the participants (95.1%) reported having been in a heterosexual relationship at some time, and their longest relationships ranged from 1 month to 60 months ( $M = 16.65$  months,  $SD = 13.9$ ). Six participants reported having been in a same-sex relationship at some time, and their longest relationships ranged from 2 months to 30 months ( $M = 12.83$  months,  $SD = 11.356$ ).

Significantly more women (85.4%) than men (39%) described their amount of childcare experience as average or above average,  $\chi^2(3, N = 82) = 19.229, p < .001$ . No other gender differences were found for items in this section.

### *Expectations for Future Families*



The Expectations for Future Family scale was created from the total of seven 5-point items (10, 11, 13, 14, and 18-20 in Appendix B). The range of possible scores for this scale was 7 to 35. No gender differences were found on the scale scores. For the entire sample, the mean of 27.87 ( $SD = 4.26$ ) indicates that participants tended to expect that they will have a life-long partner and will raise children. For individual items in the scale, gender differences were found for only one item. Women think about their future families significantly more often than do male participants,  $\chi^2(4, N = 82) = 13.15, p = .01$ .

Results for the timing of family formation in the life course are presented in Table 2. Males and females differed in the youngest age at which they would make a commitment to a life-long partner. Women reported a significantly younger age than men,  $t(80) = 2.44, p = .017$ . For the youngest age at which participants would begin to raise a first child, no gender differences were found. Responses ranged from 23 to 35 years, ( $M = 27.62$  years,  $SD = 2.42$ ). Males and females differed in the oldest age at which they would begin to raise a first child with women reporting a significantly younger age than men,  $t(80) = 3.27, p = .002$ . No significant gender differences were found for the remaining questions in this section. Participants reported 0 to 9 for the number of children they expected to raise. The least number of children participants expected to raise was 1 or 2 children ( $M = 1.54, SD = .92$ ). The greatest number of children participants expected to raise was 3 or 4 children ( $M = 3.78, SD = 1.41$ ).

Table 2

*Timing of Family Formation in the Life Course*

| Variable                          | Males |      |       | Females |      |       |
|-----------------------------------|-------|------|-------|---------|------|-------|
|                                   | M     | SD   | Range | M       | SD   | Range |
| Youngest life-long<br>commitment  | 25.39 | 2.19 | 21-30 | 24.34   | 1.65 | 22-28 |
| Youngest age raise<br>first child | 27.80 | 2.60 | 23-35 | 27.44   | 2.25 | 24-33 |
| Oldest age raise<br>first child   | 38.61 | 4.18 | 32-50 | 35.76   | 3.71 | 28-42 |
| Least children                    | 1.37  | .94  | 0-4   | 1.71    | .87  | 0-3   |
| Greatest children                 | 3.76  | 1.55 | 0-9   | 3.80    | 1.29 | 2-7   |

*Note.* The first three variables are ages recorded in years. The last two variables are numbers of children.

#### *Attitudes Toward Adoption and ART*

No gender differences were found in this section. Almost all participants (90.2%) indicated they were very open or open to adoption. For IVF, over half the participants (57.3%) were very open or open to this method. Participants were less open to the other three methods of ART. For donor insemination, 23.2% of participants were very open or open. For egg donation, 26.9% of participants were very open or open. For surrogate motherhood, 20.7% of participants were very open or open.

A one-way repeated-measures ANOVA indicated that openness to these five methods differed significantly,  $F(4, 78) = 67.13, p < .001$ . Follow-up paired-samples  $t$ -tests found that participants were significantly more open to adoption than to any of the ART methods,  $t(81) = 6.6, p < .001$ , and significantly more open to IVF than to any of the other three ART methods,  $t(81) = 9.89, p < .001$ . No significant differences were found among donor insemination, egg donation, and surrogate motherhood (Table 3).

Adoption was chosen most frequently as the preferred method of having children in three hypothetical situations: no life-long partner (58.5% of participants), partner unable to have children (61%), and self unable to have children (64.6%). ART “so I can be genetically related to my child” was the second most frequently preferred method in two of the hypothetical situations: partner unable to have children (35.4% of participants) and self unable to have children (25.6%). In the hypothetical situation in which the participant has no life-long partner, the second most frequently preferred method was to not have children (24.4%). Overall the results show a preference for adoption, with ART as a second choice *unless* the participant has no partner, in which case the second most preferred option is not to have any children (Tables 4a-4c).

All participants strongly agreed (81.7%) or agreed (18.3%) that a non-biological parent can be as effective, supportive, and loving as a biological parent.

Table 3

*Openness to Adoption and ART*

| Method            | Mean | Std. Deviation | N  |
|-------------------|------|----------------|----|
| Adoption openness | 4.54 | .878           | 82 |

|                           |             |              |           |
|---------------------------|-------------|--------------|-----------|
| IVF openness              | 3.59        | 1.175        | 82        |
| DI openness               | 2.51        | 1.250        | 82        |
| Egg donation openness     | 2.61        | 1.204        | 82        |
| <u>Surrogacy openness</u> | <u>2.50</u> | <u>1.326</u> | <u>82</u> |

*Note.* Means are reported from a scale of 1 = *not open* to 5 = *very open*.

Table 4a

*Preferred Method, No Life-Long Partner*

| <u>Method</u>                | <u>Frequency</u> | <u>Percent</u> |
|------------------------------|------------------|----------------|
| Adoption                     | 48               | 58.5           |
| ART so can be genetic parent | 14               | 17.1           |

|                                      |           |             |
|--------------------------------------|-----------|-------------|
| ART even if cannot be genetic parent | -         | -           |
| <u>No children</u>                   | <u>20</u> | <u>24.4</u> |

Table 4b

*Preferred Method, Partner Unable to Have Children*

| <u>Method</u>                       | <u>Frequency</u> | <u>Percent</u> |
|-------------------------------------|------------------|----------------|
| Adoption                            | 50               | 61.0           |
| ART so can be genetic parent        | 29               | 35.4           |
| ART even if can't be genetic parent | 1                | 1.2            |
| <u>No children</u>                  | <u>2</u>         | <u>2.4</u>     |

Table 4c

*Preferred Method, Self Unable to Have Children*

| <u>Method</u>                | <u>Frequency</u> | <u>Percent</u> |
|------------------------------|------------------|----------------|
| Adoption                     | 53               | 64.6           |
| ART so can be genetic        | 21               | 25.6           |
| ART even if can't be genetic | 5                | 6.1            |
| <u>No children</u>           | <u>2</u>         | <u>2.4</u>     |

### *Disclosure*

Preliminary analyses indicated no gender differences on any items in this section; data for males and females were collapsed. A series of one-way repeated-measures ANOVA tests were conducted to test differences among the three hypothetical situations (adoption, ART where the participant is the genetic parent, and ART where the participant is not the genetic parent) for each of three types of disclosure (answering children's questions, initiating discussions with children, and being open with parents.)

The majority of participants reported that they would answer their children's questions truthfully in all three situations. A one-way repeated-measures ANOVA indicated a significant difference among the three situations,  $F(2, 80) = 6.47, p = .002$ . Follow-up paired samples  $t$ -tests showed that participants would be more likely to answer their children's questions truthfully had they used either adoption or ART and were the genetic parent than if they had used ART and were not the genetic parent,  $t(81) = 3.35, p = .001$  (Table 5a).

Similarly, the majority of participants agreed or strongly agreed that they would initiate discussions with the child in all three situations. A one-way repeated-measures ANOVA indicated a significant difference among the three situations,  $F(2, 80) = 13.33, p < .001$ . Follow-up paired sample  $t$ -tests found that participants would be significantly more likely to initiate a conversation with a child if they had used adoption than if they had used ART, regardless of their genetic relatedness to the child,  $t(81) = 5.03, p < .001$  (Table 5b).

The third type of disclosure, being open with parents and partner's parents, also followed the same pattern. The majority of participants strongly agreed or agreed that they would be open with their parents in all three situations. A one-way repeated-measures ANOVA indicated a significant difference among the three situations,  $F(2, 80) = 16.92, p <$

.001. Follow-up paired samples *t*-tests indicated that all three situations were significantly distinct from one another. Openness with parents was more likely with adoption than with ART if they were the genetic parent,  $t(81) = 5.25, p < .001$ , and more likely with ART if they were the genetic parent than with ART if they were *not* the genetic parent  $t(81) = 3.03, p = .003$  (Table 5c).

A final one-way repeated-measures ANOVA was conducted, collapsing across the three situations. A significant effect was found for the type of disclosure,  $F(2, 80) = 18.67, p < .001$ . Follow-up paired samples *t*-tests found that participants would be more likely to answer children's questions and be open with parents than they would be to initiate a conversation with their child,  $t(81) = 5.34, p < .001$  (Table 6).

Table 5a

*Answering Children's Questions About Adoption and ART*

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| <u>Method</u>                  | <u>Mean</u> | <u>Std. Deviation</u> | <u>N</u>  |
|--------------------------------|-------------|-----------------------|-----------|
| Adoption                       | 4.48        | .757                  | 82        |
| ART, genetic parent            | 4.38        | .811                  | 82        |
| <u>ART, not genetic parent</u> | <u>4.23</u> | <u>.865</u>           | <u>82</u> |

*Note.* Means are reported from a scale of 1 = *strongly disagree* to 5 = *strongly agree*.

Table 5b

*Initiating Discussion with Children About Adoption and ART*

| <u>Method</u>                  | <u>Mean</u> | <u>Std. Deviation</u> | <u>N</u>  |
|--------------------------------|-------------|-----------------------|-----------|
| Adoption                       | 4.05        | .928                  | 82        |
| ART, genetic parent            | 3.71        | .975                  | 82        |
| <u>ART, not genetic parent</u> | <u>3.59</u> | <u>1.088</u>          | <u>82</u> |

*Note.* Means are reported from a scale of 1 = *strongly disagree* to 5 = *strongly agree*.

Table 5c

*Disclosing to Parents About Adoption and ART*

| <u>Method</u>                  | <u>Mean</u> | <u>Std. Deviation</u> | <u>N</u>  |
|--------------------------------|-------------|-----------------------|-----------|
| Adoption                       | 4.74        | .540                  | 82        |
| ART, genetic parent            | 4.29        | .824                  | 82        |
| <u>ART, not genetic parent</u> | <u>4.17</u> | <u>.927</u>           | <u>82</u> |

*Note.* Means are reported from a scale of 1 = *strongly disagree* to 5 = *strongly agree*.

Table 6

*Likelihood of Disclosing About Adoption and ART by Type of Disclosure*

| <u>Method</u> | <u>Mean</u> | <u>Std. Deviation</u> | <u>N</u> |
|---------------|-------------|-----------------------|----------|
|---------------|-------------|-----------------------|----------|



|                                |             |             |           |
|--------------------------------|-------------|-------------|-----------|
| Answer child's questions       | 4.36        | .739        | 82        |
| Initiate discussion with child | 3.78        | .895        | 82        |
| <u>Disclose to parents</u>     | <u>4.40</u> | <u>.668</u> | <u>82</u> |

*Note.* Means were calculated by collapsing across adoption and ART methods for the three types of disclosure. Means are reported from a scale of 1 = *strongly disagree* to 5 = *strongly agree*.

#### *Relationships with Extended Family*

The majority of participants reported that building and maintaining relationships with grandparents and other extended relatives would be an important part of life for their children to experience and enjoy. The majority of participants strongly agreed or agreed that it was important for their parents to get along with their future spouse or life-long partner (90.2%). Women rated this relationship as significantly more important than did men,  $t(80) = -2.07$ ,  $p = .042$ . No other gender differences were found in this section. The majority of participants strongly agreed or agreed that it is important for their children to have close relationships with their grandparents and extended relatives (91.5%), and that they expected regular contact with extended family members in the future (97.6%).

Preliminary analyses of open-ended interview questions on relationships with extended family are summarized in Tables 7 and 8. For the question, 'Why are relationships with grandparents and extended relatives important?', the most frequent theme was that the extended family is a network of support and love that goes beyond one's parents (63.4%).

The second most frequent theme was that positive experiences in participants' families of origin led to the desire that future children have the same good experiences (58.5%). A theme for a smaller number of participants was that families of origin lacked close relationships, and participants wanted their future children to have better experiences (26.8%). Finally, a theme for some participants was that relationships with extended family can foster an understanding of roots and culture (28%).

A relatively small number of participants (14.6%) talked about why relationships with extended relatives are not important. One theme was that the participants' families of origin were lacking in close relationships (7.3%). Another theme was that participants were indifferent to these relationships and believed that relationships should not be planned or forced (7.3%). A final theme was that the nuclear family or a circle of friends is more important than the extended family (3.7%).

Participants reported various ways in which they could help their children build relationships with extended relatives. The two most frequent strategies were visiting or spending time in person (63.4%), and getting together for special occasions and family traditions (54.9%).

Table 7

*Reasons for Importance of Extended Family*

| <u>Response</u>                          | <u>Frequency</u> | <u>Percent</u> |
|--|------------------|----------------|
| Network of love and support              | 52               | 63.4           |
| Positive experiences in family of origin | 48               | 58.5           |

|   |           |             |
|---|-----------|-------------|
| Family of origin lacked close relationships | 22        | 26.8        |
| <u>Understand roots and culture</u>         | <u>23</u> | <u>28.0</u> |

*Note.* Responses to open-ended questions; participants could give more than one response.

Table 8

*Reasons for Non-Importance of Extended Family*

| <u>Response</u>                                  | <u>Frequency</u> | <u>Percent</u> |
|--|------------------|----------------|
| Family of origin lacked close relationships      | 6                | 7.3            |
| Indifference, no planned or forced relationships | 6                | 7.3            |
| <u>Nuclear family or friends more important</u>  | <u>3</u>         | <u>3.7</u>     |

*Note.* Responses to open-ended questions; participants could give more than one response.

### *Sexual Orientation and Views on Creating Families*

The 13 homosexual and bisexual participants are of interest because, to raise a child, they would need to choose adoption or a method of ART. Within this group of 13 participants were 5 homosexual men, 5 bisexual men, and 3 bisexual women. Among these participants were five sophomores, two juniors, and six seniors, with a mean age of 20.4 years, ( $SD = .84$ ). Eleven of the 13 participants (84.6%) were raised in two-parent families; all were raised by their biological mothers, and 11 (84.6%) by their biological fathers. As reported earlier, two participants were currently in exclusive, romantic relationships with a person of the same sex. Of the 13 homosexual and bisexual participants, 6 expected to have a same-sex life-long partner, 4 expected to have an opposite-sex life-long partner, and 3 participants did not report the expected gender of their future life-long partner.

An independent samples  $t$ -test was conducted between the 10 homosexual and bisexual males and the 31 heterosexual males. Because of the small size of the homosexual/bisexual group, these results must be interpreted with caution.

Few significant differences were found between homosexual/bisexual males and heterosexual males. Differences were found in attitudes toward adoption and ART and relationships with extended family. The  $t$ -tests were calculated with equal variances not assumed. Both groups reported that a non-biological parent can be as effective, supportive and loving as a biological parent, but the homosexual/bisexual group agreed more strongly with this statement,  $t(30) = -2.96, p = .006$ . Homosexual and bisexual men were more likely than heterosexual men to report they would initiate a discussion with a child had they used ART and were not the genetic parent,  $t(22.45) = -2.7, p = .01$ . Homosexual and bisexual men reported that it was less important for their parents to get along with their future partner than did heterosexual men,  $t(10.97) = 2.2, p = .05$ . Finally, homosexual and bisexual men

reported that it was less important for their children to have close relationships with grandparents and extended relatives than did heterosexual men,  $t(11.3) = 2.43, p = .03$ .

## Discussion

The backgrounds and experiences of the participants are consistent with their expectations for having a family in the future. That both males and females expected to have a life-long partner and to raise children is not surprising, especially considering that nearly all of the participants were raised by their biological mothers and fathers. Having been raised in a traditional two-parent family might have influenced participants' expectations for their own futures. Most participants had been in an exclusive, romantic relationship at some point and nearly all participants had at least some experience with childcare. Experience in a romantic relationship might offer participants at least some insight into the nature of long-term relationships. Similarly, experience in childcare provides some insight into the nature of parenthood. These participants predominantly were raised in two-parent families, had been in a romantic relationship at some point, and had at least some childcare experience, which may orient them toward the expectation of building a family of their own in the future. In addition, the participants' experiences in a Jesuit, Catholic university may have contributed to their pro-family responses.

One of the most important findings of this study is that men and women seem to be more alike than they are different in their views on creating families. In only a few instances were women significantly different from men. Responses from the men and women were dissimilar on the topics of thinking about one's future family and planning the timing of one's life course. Results showed that women think about their future family significantly more frequently than men do. This finding could have several explanations. One explanation may be that the female participants think about their future families more because they may be anticipating a conflict between the demands of their future family and their career (Arnold, 1993). In Arnold's studies of high-achieving female students, she found

that the ambitions and aspirations of women who are very successful in high school tend to decline as these women progress through college. The young women in Arnold's studies seemed to expect that they would need to make compromises by lowering their career ambitions in order to accept more responsibility in the home. According to Arnold, this perceived conflict between the demands of career and family is not nearly as apparent among men because traditionally they are expected to make their career a priority. In light of Arnold's conclusions, perhaps the women in the present study spend more time thinking about their future families because they are concerned about balancing career and family, whereas the men do not necessarily anticipate this balance issue causing problems for them.

Male and female participants expressed some different opinions about how they would plan the timing of their life course. Women could see themselves beginning a family at a younger age than the men envisioned; this finding may be related to the finding that the women think about their future families more often. Because the female participants have spent more time thinking about their future families, they may be ready to begin creating a family at an earlier age. For beginning to raise one's first child, it is not surprising that the male participants gave a larger range of ages that extended later into the lifespan (up to 50 years, as opposed to the women's maximum of 42 years.) Biologically, men are able to reproduce for a longer period of their lives than women are, and, prior to menopause, health risks associated with pregnancy and labor increase for women as they age.

Participants were most open to adoption, their second choice was IVF, and the other three methods – donor insemination, egg donation, and surrogate motherhood – were the least preferred. This ordering of preferences could have been influenced by a variety of factors including issues of genetic relatedness, involvement in the pregnancy process, religious and moral factors, and effects on family relationships.

Genetic relatedness to one's child and involvement in the pregnancy process were both desirable to the majority of participants, which explains why IVF was the most preferred method of assisted reproduction. Only IVF offers couples the possibility of having both parents (in a heterosexual couple) genetically related to the child and involved in the pregnancy process. IVF can avoid the problems with other methods, particularly donor insemination and egg donation, in which the child is raised by one biological parent and one non-biological parent. In a family created via donor insemination or egg donation, there is the concern that relationship between partners may be damaged by a perceived imbalance in parental status (Shanley, 2001).

Another benefit of IVF, and also of donor insemination and egg donation, is that the woman and her partner are still able to experience or be directly involved in the pregnancy process. The process of pregnancy can be beneficial both for the birthmother and her spouse or partner; it is a time for special bonds to form between the developing baby and the expecting parents. Moreover, the pregnancy experience can deepen the relationship between the two partners as they track the baby's growth and plan for exciting changes in their life together.

It follows, then, that because surrogate motherhood is a method in which the pregnancy experience is removed from the parents, this method might seem less appealing than some of the others. However, surrogate motherhood was not less preferred than donor insemination and egg donation. Perhaps this result was found because surrogate motherhood has a benefit not shared with donor insemination or egg donation. In a surrogacy arrangement there is the possibility for both partners in a heterosexual couple contribute genetically to their child.



Adoption does not allow for genetic relationships between parents and children, nor does it allow for involvement in the pregnancy process, yet it was the most preferred method over all of the ART methods. Multiple factors may explain this apparent paradox. One factor involves helping to solve one of the world's greatest social problems: an excess of unwanted children born into unhealthy environments. The prospect of helping children in need could potentially overshadow the importance of having a genetic tie to one's child. Perhaps genetic relatedness is important and desirable, but not more important than the love between parent and child. Moreover, even though the adoptive parents would not be genetically related to their child, they would be on an equal status with each other in that they *both* would not be related. In this sense, adoption avoids some of the problems of donor insemination and egg donation, which only allow for a genetic connection for one of the parents.

Another characteristic of adoption that may enhance its appeal over ARTs is that it may be perceived as the most natural option because it does not require a medical procedure. Some of the medical procedures associated with ART methods can be causes for moral concern. For example, multiple embryos are created in an IVF procedure, which can create two morally problematic results. First, some of the embryos may be discarded, so those who believe that life begins at conception may not condone this practice. Second, multiple embryos may be implanted in the woman's uterus to increase the likelihood of success, but this may result in multiple babies beginning to develop inside the mother, which could heighten the risks to the mother and the developing fetuses (Cooper & Glazer, 1998).

Another possible reason for adoption being preferred overall is the issue of a "third party." The involvement of a third party may be necessary in all five of these methods, but an adoption situation may be viewed very differently from a situation involving a sperm or

egg donor, or a surrogacy arrangement. If a woman accepts sperm from an anonymous donor, that stranger is involved in the reproductive process at a very intimate level. A method involving a donor could be viewed as invasive because it often involves mixing one's gametes with those of a stranger. With adoption, the child is already born, and the adoptive parents are better able to protect their own privacy and perhaps to preserve the belief that they are using a natural method.

In addition to preferring adoption over the ART methods, most participants were also more agreeable to disclosure with adoption than with ART. In ART situations, participants reported being more likely to answer children's questions and initiate conversations if they were the child's genetic parent than if they were not the genetic parent. Golombok, Murray, Brinsden, and Abdalla (1999) also found that a large proportion of parents who have used donor insemination have decided never to tell their children. The authors reported that the parents who had decided against disclosure did so to protect the father from shame. Thus, from a young adult's point of view it may seem easier and safer to disclose to a child when one is the genetic parent because social stigma is lessened and negative emotions related to infertility are not present.

The results showed that participants would be more likely to be open with their parents about adoption or ART than they would be to initiate a conversation with their child. This finding could stem from participants' uncertainty about how to explain these methods in ways that a child could understand. Golombok (1999) has noted that there are "no generally accepted stories" for how to talk to children about ART. The timing of disclosure may be crucial to a child's acceptance of this new information. Some psychologists argue that it is best to tell children early about adoption or ART, perhaps even before they can understand, and to keep adding information gradually over time, so the children grow up feeling as if

they have “always known” about their origins (Cooper & Glazer, 1998). Moreover, if parents were to tell other family members about adoption or ART before they disclosed to their child, chances would increase that the secret would be revealed accidentally by someone other than the child’s parents, which could cause the child to feel betrayed or deceived.

Many participants’ concept of family seemed to extend beyond the household unit to encompass grandparents, aunts, uncles, and cousins. Even participants who had not experienced close family relationships first-hand in their families of origin were planning to ensure that their children have relationships with their extended family. Several participants who did have relationships with their extended family planned to preserve family traditions in the future. Even with the diversity of family forms that are possible today and the stigma that may be attached to families created with reproductive assistance, participants still think relationships with grandparents and extended relatives are important, and they are motivated to maintain connections with the extended family (Patterson, et al., 1998). These findings suggest that expectations for future family life include plans for the nuclear family and also for fitting that smaller unit into a larger network of grandparents, aunts, uncles, and cousins.

The differences found between the homosexual/bisexual men and the heterosexual men should be discussed with reserve, considering the small size of the first group. It was not surprising that homosexual and bisexual men agreed more strongly with the statement that a non-biological parent can be as effective and supportive as a biological parent because either these individuals or their partners will be non-biological parents if they choose to have children. The finding that homosexual and bisexual participants attributed less importance to relationships with extended relatives seems to contradict the findings of Patterson, et al. (1998) which were that lesbian mothers maintained regular contact with extended relatives.

Perhaps the results of this study were different because the respondents were homosexual men as opposed to women. Another explanation is that whereas Patterson's study surveyed people who were already parents who had been mostly successful in keeping contact with relatives, whereas the participants in the present study were young adults who could be anticipating more difficulties than they would actually encounter as parents.

Limitations of this study are that all participants were students in a prestigious Jesuit, Catholic university and were predominantly Caucasian, heterosexual, and raised by both biological parents. The results of this study cannot be generalized to other populations of college students or to young adults who are not in college. This study could best be improved by replication on a larger scale, using a sample that includes ethnically diverse participants, young adults who do not attend college, individuals not raised by both of their biological parents, and homosexual and bisexual participants.

This study contributes to our understanding of the how developments in ART and increased possibilities for the creation of diverse families have affected views on what makes a family. Both women and men expect to have families in the future and both seem open to using alternative methods if they cannot have children without assistance. In spite of amazing new innovations in the field of reproductive technology, adoption is still the most preferred alternative method of having children. Participants still desire a genetic connection to their children, but the social aspects of parenthood seem to be more important. Finally, despite all the changes in the modern family, extended family is still an important part of the family concept. As ART is developing, the current generation of young adults may be pioneers who create the foundation for eventual social acceptance of these new methods and diverse families. The more understanding and accommodating society is toward new types

of families, the easier it will be for the children who are raised in these families to achieve security and happiness.

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## Appendix A

Participants from Student Organizations

| <u>Organization</u>                     | <u>Participants</u> |
|---|---------------------|
| Halftime <sup>a</sup>                   | 16                  |
| Chorale                                 | 16                  |
| Arts & Sciences Honors Program          | 11                  |
| CCE <sup>b</sup>                        | 10                  |
| Best Buddies <sup>c</sup>               | 9                   |
| LGBC <sup>d</sup>                       | 6                   |
| Psychology Club                         | 4                   |
| AHANA <sup>e</sup>                      | 3                   |
| Dance Ensemble                          | 2                   |
| <u>Partnership for Life<sup>f</sup></u> | <u>1</u>            |

<sup>a</sup> Halftime is a retreat group for juniors

<sup>b</sup> CCE is the Committee for Creative Enactments, a theatre group

<sup>c</sup> Best Buddies is a group volunteering with people with developmental disabilities

<sup>d</sup> LGBC is the Lesbian, Gay, and Bisexual Community

<sup>e</sup> AHANA is the African, Hispanic, Asian, or Native American organization

<sup>f</sup> Partnership for Life is a pro-life (anti-abortion) activist group



## Appendix B

## Questionnaire

Current Views on Creating Families

PN \_\_\_\_\_

Age: \_\_\_\_\_ years

Year at BC (*please circle*):    Sophomore                      Junior                      SeniorGender (*please circle*):            Female                      Male

1. Please check the choice that best describes the parents or guardians who raised you.

 I was raised by two parents. I was raised by one parent. Other: \_\_\_\_\_

2. Please check the choices that describe your parents' or guardians' relation to you:

MOTHERFATHER biological mother biological father adoptive mother adoptive father step-mother step-father other: \_\_\_\_\_ other: \_\_\_\_\_

**Please circle the number that corresponds with your rating of how much you agree or disagree with the following items.**

3. I have close relationships with some of my extended family members (e.g. grandparents, aunts, uncles, cousins).

1

2

3

4

5

strongly disagree

disagree

neither agree

agree

strongly agree

nor disagree

4. I currently am in an exclusive romantic relationship with a person of the **OPPOSITE** sex  
(please circle):            Yes            No

For how long has it lasted? \_\_\_\_\_

5. My longest romantic relationship with a person of the **OPPOSITE** sex has lasted \_\_\_\_  
\_\_\_\_\_.

6. I currently am in an exclusive romantic relationship with a person of the **SAME** sex  
(please circle):            Yes            No

For how long has it lasted? \_\_\_\_\_

7. My longest romantic relationship with a person of the **SAME** sex has lasted \_\_\_\_  
\_\_\_\_\_.

8. My sexual orientation is (please circle):

heterosexual

homosexual

bisexual

9. How much experience have you had in taking care of children?

1

2

3

4

no experience

a little experience

average experience

much experience

Please indicate type of experience; check all that apply.

\_\_\_\_ Taking care of younger siblings or other relatives

\_\_\_\_ Babysitting jobs

\_\_\_\_ Work in day care, camp, or school setting

\_\_\_\_ Other: \_\_\_\_\_

10. How often do you think about the family you may create one day?

1

2

3

4

5

never

very rarely

occasionally

fairly often

often

11. I expect to have a spouse or life-long partner.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

12. In relation to me, my partner would be of the (*please circle*):

|              |          |
|--------------|----------|
| opposite sex | same sex |
|--------------|----------|

13. I would be content never to commit myself to one person in a marriage or life-long relationship.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

14. I expect to raise at least one child.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

15. What is the **youngest** age at which you could see yourself marrying or making a life-long commitment to a partner? \_\_\_\_\_

16. What is the **youngest** age at which you could see yourself beginning to raise your first child? \_\_\_\_\_

The **oldest** age? \_\_\_\_\_

17. How many children do you expect to raise?

**Least** number of children: \_\_\_\_\_

**Greatest** number of children: \_\_\_\_\_

18. I would be content to spend my life with a life-long partner but never raise children.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

19. I would be content to live my life without a life-long partner **AND** without children.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

20. If I were never to make a life-long commitment to a partner, I would try to raise children on my own.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

PN\_\_\_\_\_

DifferentKindsOfFamilies

21. Imagine that you or your life-long partner cannot conceive children naturally, and you are considering alternative methods of having your children. Please rate how open you feel to using each of the following methods.

A. Adoption

|          |               |                 |      |           |
|----------|---------------|-----------------|------|-----------|
| 1        | 2             | 3               | 4    | 5         |
| not open | a little open | moderately open | open | very open |

B. In vitro fertilization

|          |               |                 |      |           |
|----------|---------------|-----------------|------|-----------|
| 1        | 2             | 3               | 4    | 5         |
| not open | a little open | moderately open | open | very open |

C. Donor insemination

|          |               |                 |      |           |
|----------|---------------|-----------------|------|-----------|
| 1        | 2             | 3               | 4    | 5         |
| not open | a little open | moderately open | open | very open |

D. Egg donation

|          |               |                 |      |           |
|----------|---------------|-----------------|------|-----------|
| 1        | 2             | 3               | 4    | 5         |
| not open | a little open | moderately open | open | very open |

E. Surrogate motherhood

|          |               |                 |      |           |
|----------|---------------|-----------------|------|-----------|
| 1        | 2             | 3               | 4    | 5         |
| not open | a little open | moderately open | open | very open |

22. If I were to try to have a child on my own **without a life-long partner**, I would prefer to have that child by means of (*please check one*):

Adoption

Assisted reproduction (so that I could be genetically related to my child)

Assisted reproduction (even if I cannot be genetically related to my child)

\_\_\_ I would not have children without a partner.

23. If **I am able** to have children, but **my life-long partner is not**, I would prefer to use:

\_\_\_ Adoption

\_\_\_ Assisted reproduction (so that I could be genetically related to my child)

\_\_\_ Assisted reproduction (even if I cannot be genetically related to my child)

\_\_\_ I would not have any children in this situation.

24. If **my life-long partner is able** to have children, but **I am not**, I would prefer to use:

\_\_\_ Adoption

\_\_\_ Assisted reproduction (so that I could be genetically related to my child)

\_\_\_ Assisted reproduction (even if I cannot be genetically related to my child)

\_\_\_ I would not have children in this situation.

25. I feel that a non-biological parent can be as effective, supportive, and loving as a biological parent.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

26. If my child asked me questions about being **adopted**, I would always answer truthfully.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

27. If my child was born through **assisted reproduction** such that **I was the genetic parent**, I would always answer his or her questions about this truthfully.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

28. If my child was born through **assisted reproduction** such that I was **NOT** the genetic parent, I would always answer his or her questions about this truthfully.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

29. If my child were **adopted**, I would initiate discussions with him or her about this.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

30. If my child were born through **assisted reproduction**, such that **I was the genetic parent**, I would initiate discussions with him or her about this.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

31. If my child were born through **assisted reproduction**, such that I was **NOT** the genetic parent, I would initiate discussions with him or her about this.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

32. If my child were **adopted**, I would discuss this openly with my parents and/or my life-long partner's parents.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

33. If my child were born through **assisted reproduction**, such that **I was the genetic parent**, I would discuss this openly with my parents and/or my life-long partner's parents.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

34. If my child were born through **assisted reproduction**, such that I was **NOT** the genetic parent, I would discuss this openly with my parents and/or my life-long partner's parents.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

35. It is important to me that my parents get along with the spouse or life-long partner that I choose.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

36. It is important to me that my children have close relationships with their grandparents and/or other extended family members.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |

37. I expect that my future family will have regular contact with at least some of our extended family members via phone calls, visits, or other ways.

|                   |          |                               |       |                |
|-------------------|----------|-------------------------------|-------|----------------|
| 1                 | 2        | 3                             | 4     | 5              |
| strongly disagree | disagree | neither agree<br>nor disagree | agree | strongly agree |



## Appendix C

## Interview Questions

1. In the future, do you expect that you will raise children?
  - 1a. Why do you plan on having children?
  - 1b. Why do you plan on not having children?
  
- 2a. Imagine that you need to consider alternative ways of having children: What do you think are the benefits of adopting children?
- 2b. Do you see any drawbacks to adoption, and what might they be?
  
3. Let's take another look at the methods of assisted reproduction that we've talked about.
  - a. *in vitro* fertilization – benefits? drawbacks?
  - b. donor insemination - benefits? drawbacks?
  - c. egg donation - benefits? drawbacks?
  - d. surrogate motherhood - benefits? drawbacks?
  
4. If you had adopted a child, do you think it would be important to talk with your child about being adopted?

Why is it important/not important to talk about adoption?

At what age in the child's life might you begin talking about adoption?

What kinds of things might you say to your child?
  
5. If your child was born through *in vitro* fertilization, do you think it would be important to talk about this with him or her?

Why is it important/not important to talk about *in vitro*?

At what age in the child's life might you begin talking about *in vitro*?

What kinds of things might you say to your child?

6. If your child was born through donor insemination or egg donation, do you think it would be important to talk about this with him or her?

Why is it important/not important to talk about a method involving a sperm or egg donor?

At what age in the child's life might you begin talking about these methods?

What kinds of things might you say to your child?

7. If your child was born through surrogate motherhood, do you think it would be important to talk about this with him or her?

Why is it important/not important to talk about surrogate motherhood?

At what age in the child's life might you begin talking about surrogate motherhood?

What kinds of things might you say to your child?

8. Do you think it is important for your future children to be able to build relationships with their grandparents and other extended relatives?

Why or why not?

What are some ways that you plan to help your children build relationships with their extended family members?

## Appendix D

### Adoption and ART Explanations

Adoption is when one parent or couple takes legal custody of a child, and they raise the child as their own. Adopted children are not genetically related to the adoptive parents who raise them.

In vitro fertilization (IVF) is when an egg and sperm are joined together in a Petri dish instead of inside a woman's body. Then the embryo is placed back inside the woman's body so she can still carry the child and give birth. With IVF you have a few possibilities for genetic relationships. One is that the egg and sperm can both come from the parents that want to raise the child. Or you could have the sperm coming from a donor, or the egg coming from a donor, or both sperm and egg coming from donors. Thus, the child could be genetically related to both parents, or only one parent, or neither.

Donor insemination, is when the sperm is received from a donor; most of the time he is anonymous. The child will not be raised by the genetic father.

Egg donation is when eggs are surgically removed from a woman and donates them. The woman that receives the donated egg is able to carry the child and give birth, but the child is not genetically hers.

Surrogate motherhood is when a woman makes an agreement with people that she would carry a child for them and give the baby up for them to raise. Sometimes the surrogate mother is a stranger and the people who want to raise the child pay her for helping them. Other times the surrogate mother could be a sister or close friend to the people who want to raise the child. There are a few possibilities for genetic relatedness with this method. The child's genetic mother could be either the surrogate mother or the woman who wants to raise

the child. The child's genetic father could be either a donor or the man who wants to raise the child (Scott-Jones, 2001).