

**Modern Crosses: How Christian Women Navigate Gender, Religion, and Assisted
Reproductive Technologies**

by

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ABSTRACT

The increasing use of assisted reproductive technologies (ARTs) has raised moral and ethical questions, around the creation of embryos that are discarded or otherwise do not survive the IVF process, as well as around the large-scale freezing of embryos in storage facilities. While conservative Protestants and the Catholic Church have been vocal about protecting the embryo in their opposition to abortion and stem cell research, their positions regarding ARTs diverge. Protestant denominations generally support the use of IVF and have largely remained silent about ethical or moral concerns. Catholicism, on the other hand, is the most restrictive religion in its position on ARTs. This dissertation examines how devout Catholic and evangelical Protestant women struggling with infertility navigate gender, technology, and religion when they encounter ARTs that threaten what they consider to be sacred. Drawing on interviews with 75 Catholic and Protestant women, I found that these two groups of women, who are often considered to have uniform positions regarding the moral status of the embryo as life, actually have distinct views on how life should be created and the circumstances under which embryo loss is permissible or not. For evangelicals, ARTs were collaborative co-creators with God and within the bounds of nature. For devout Catholics, the technology disrupted the natural order by supplanting God's role in life's creation. Religious schemas provided devout Catholic women with different cultural resources that help them to avoid using ARTs while still reckoning with the ideal of biological parenthood. They drew on religion to find value and meaning in their suffering, move beyond biological motherhood, and achieve a *moral femininity*. While religion increased the burden of

reproduction for devout women, it also provided the cultural resources to resist the financial, emotional, and physical difficulties experienced by women who use ARTs. For evangelical women, a deep opposition to abortion on the grounds that it destroys life and a belief in the personhood of the embryo coexisted with a reluctant acceptance of embryo loss under certain circumstances when using ARTs. In their moral reasoning, evangelical women enacted culturally valued forms of femininity that prepared them to envision themselves as mothers and enabled the achievement of attachments and kin relations that the women longed for, and were also invoked to explain why embryo loss was morally permissible in IVF treatments. By drawing on cultural ideals of femininity, the women constructed themselves as deserving of motherhood. These personal negotiations shed light on larger debates about when and why embryo loss becomes a moral issue. I argue that the fertility clinic and its largely white, middle-class clientele are shielded from the moral condemnation that abortion clinics face, because in the former, the loss of embryos occurs in a space where women are striving to become mothers. This study suggests that the fertility clinic and the abortion clinic occupy different spaces within the moral hierarchies of the stratified system of reproduction. This study contributes to our understanding of how religious sensibilities mediate one's relationship with ARTs in diverse ways.

CHAPTER 1

Introduction

"A child is a gift and not something to be produced. I just feel like IVF demeans a person so much, because the conception happens not in the throes of love, but rather in a scientific laboratory." -Marilyn, 34, devout Catholic

"My view on [frozen embryos] is that we are creating a holocaust and it's one of the biggest ones and it's unseen. Each clinic has thousands of embryos frozen, and I think once an embryo is frozen unless it's put back in the mother you cannot do much else."-Elaine, age unknown, devout Catholic

"God has blessed people with coming up with these things [IVF]...the Lord's hand is at work in different things, and we felt very adamant that it was the Lord was telling us to try it." -Sandy, 39, evangelical Christian

"Do I sometimes battle with and feel guilty about it [embryo loss from IVF] in the sense that essentially all these lives are created and don't— and don't make it? Yes...But I don't view it as destroying an unwanted life" -Lisa, 29, evangelical Christian

This dissertation and examines how devout Catholic and evangelical Protestant women struggling with infertility navigate gender, technology, and religion when they encounter assisted reproductive technologies (ARTs). The phrase "*Modern Crosses*" in the title of the dissertation has two meanings. First, it refers to the Christian idea of "bearing a cross," which in this case applies to the contemporary manifestations of pain and suffering that women experiencing infertility have historically endured. The second meaning is the contemporary situation these women find themselves in, which is at the intersection of three powerful ideological forces in their lives: gender, religion, and technology. How this intersection is experienced in the contemporary moment is affected by the context it unfolds in, the types of technology and

religion, and the way gender shapes and is shaped by the experience of both religion and technology.

The women quoted above are all experiencing infertility, are Christian, and ascribe personhood to the embryo. Yet the excerpts highlight the varied ways in which two groups of American Christian women— who are often portrayed as undifferentiated in their "pro-life" stances— encounter and try to make sense of these technologies, their desire for motherhood, and their religious sensibilities surrounding questions such as what constitutes life, how should it be created, and under what conditions is it permissible to end it? These questions are often left to experts such as bioethicists and theologians, or they are examined through measuring religious people's attitudes about these technologies (Evans, 2010). But neither of these approaches study people who are considering or undergoing treatment. I explore what happens when the pursuit of biological parenthood leads to encounters with technologies that sometimes threaten what people consider to be sacred. It is this process of meaning-making and how and why these meanings at times vary considerably among these two groups of Christian women that I explore in the following three chapters.

Before outlining the chapters, I provide a description of what fertility treatments entail and lay out the background and social, political, and economic context for the practice of ARTs in the United States.

The Technologies: Fertility Treatments in the United States

ARTs refer to fertility treatments in which eggs and sperm, also called gametes, are handled using technological instruments with the goal of achieving pregnancy. Fertility treatments, such as in vitro fertilization (IVF), developed alongside the medicalization of

infertility, which refers to the process whereby what was once considered an unfortunate circumstance of human life became defined as a medical problem necessitating medical intervention (Becker and Nachtigall, 1992). The medical definition of infertility¹ is the inability to achieve pregnancy after a year of unprotected intercourse (6 months for women over 35)².

The process of undergoing fertility treatments usually begins with less invasive and costly treatments, such as oral medications like Clomid which stimulate ovulation. If initial medications are unsuccessful, treatments then proceed to more involved, costly procedures that culminate in IVF, the most costly treatment, which averages \$10-15,000 a cycle (SART). Patients often undergo more than one cycle of IVF. Intermediate treatments such as artificial insemination involve collecting semen from a spouse or donor and transferring it to the woman's cervix or uterus (intrauterine insemination (IUI)). IVF involves hormonal stimulation of a woman's ovaries to produce more eggs than one would normally produce during ovulation, surgical removal of the eggs, which are then individually mixed with sperm (from partner or donor) in a Petri dish in the clinic laboratory. For those who have difficulties with their sperm fertilizing the egg in the Petri dish, an IVF procedure called ICSI (intracytoplasmic sperm injection) involves manually inserting sperm into an egg that was extracted from the woman's ovaries. Donor eggs, sperm, and embryos are also options, the latter being less costly than undergoing the entire IVF process because the embryos have already been created by other couples, who chose to donate their extra embryos. Genetic testing of embryos (PGD) for abnormalities before transferring them to the woman's body is an additional option when doing IVF.

¹Infertility is classified as primary or secondary. Primary infertility refers to couples who are experiencing infertility had have not had children before. Secondary infertility refers to experiencing infertility after previously having a successful pregnancy

²Though couples do not define themselves as infertile or seek treatment unless parenthood is desired (Greil, McQuillan, & Slauson-Blevins, 2011)

After the eggs are fertilized and develop in the Petri dish, three to five- day-old embryos that are deemed well-developed by physicians are transferred back to the woman's uterus. Pregnancy is achieved after an embryo successfully implants into the uterine wall. "Low-quality" embryos are typically not transferred and are discarded by physicians. Since IVF is so costly, it is more cost effective to produce as many embryos as one can in each cycle, but this raises the question—and for many, a dilemma—of what to do with extra embryos (Lyerly et al. 2006). Leftover embryos that are considered to be of “good quality” can be frozen for future use (cryopreservation), which requires annual storage fees, can be discarded, or are donated to other couples or for research with the patient’s consent. There are estimated to be over 600,000 embryos frozen in storage containers across the United States (Lewin 2015).

Different stages in the process of fertility treatments raise questions that patients must contend with, such as: How many eggs should one extract? How many eggs should one fertilize? How many embryos should one transfer at a time? What does one do with extra embryos? While these are questions for the religious and secular alike, some of these questions are especially salient for those who hold religious beliefs such as viewing the embryo being a person from the point of conception.

Yet , prior research shows that questions of life and the practice of religion varies in different contexts that shape not only the availability and practice of ARTs and how one views such technologies, but also forms of religiosity practiced (Roberts 2007, 2011, 2012). Christian women’s experiences with and understandings of ARTs must therefore be situated within the specific context of the United States, which shaped not only the emergence and practice of ARTs, but also the forms of gendered, religious identities that emerge in these contexts.

Social Context for the Practice of ARTs in the United States

Political, economic, and social contexts shape both the practice of ARTs and religion. Just as there is no uniform way of “being religious,” prior research shows that there is no one Catholic, Muslim, Hindu, or Jewish approach to using and thinking about these technologies (Bharadwaj 2006; Birenbaum-Carmeli 2004, 2009, Inhorn 2006, 2012; Inhorn and Birenbaum-Carmeli 2008; Kahn 2000; Roberts 2012; Teman 2010). Different national cultural values and institutions shape systems of social welfare, the provisioning of healthcare and who has access to it, the development of medical technologies, and religious people’s responses to them. For example, while the use of ARTs has increased worldwide, regulation and insurance coverage of IVF can vary considerably between national contexts (Inhorn and Birenbaum-Carmeli 2008). Religious approaches to ARTs are thus not dictated solely by religious belief or doctrine, but are shaped by economic, political, and social factors.

In her work on women's complex decision-making surrounding amniocentesis in the United States, anthropologist Rayna Rapp writes, "biomedical technology is itself a highly contested cultural object, porous in its diverse social constructions, uses, and exclusions" (Rapp, 2004). ARTs in the United States are one such object. IVF practice in the United States was shaped by three main factors: the absence of universal healthcare; abortion politics in the wake of *Roe v. Wade* that resulted in a lack of federal regulation for the practice of ARTs, and restrictions on federal funding for research on human embryos (Thompson, 2016).

The first successful “test tube baby,” Louise Brown, born as a result of IVF in Great Britain in 1978, marked the beginning of what is now a burgeoning, multibillion-dollar US medical market for technologies that assist those unable to procreate through heterosexual intercourse (Henig

2006). The “reproductive revolution” that Brown’s birth began was preceded by another reproductive revolution in the United States, when in 1973 *Roe v. Wade* legalized first-trimester abortion (Henig 2006). After the legalization of abortion, it was feared by those in the anti-abortion movement that human embryo research would further legitimize and even encourage abortion (Wertz 2002). Anti-abortion backlash following the Supreme Court’s landmark decision profoundly shaped the practice of ARTs in the United States.

Early attitudes towards IVF in the United States were thus less positive than they are today. Most opposed these technologies prior to first successful births that resulted from IVF (Thompson 2016). The Catholic Church spoke out and is one of few voices that continues to oppose the technologies. In its instruction *Donum Vitae*, the Church formally set out its opposition on the grounds that the separation of procreation from marital intercourse, and the destruction and harming of embryos in clinics, were immoral. Protestant theological ethicists had varied positions. For example, the Protestant ethicist Paul Ramsey argued that the limitless exercise of human freedom in technological interventions in reproduction has the effect of restricting our humanity (Meilaender, 1991). Ramsey viewed such technologies as dehumanizing and affronts to man- and womanhood. But while the general public’s attitudes towards the technology swiftly turned more positive as those struggling with infertility saw a technological solution within reach after Louise Brown’s birth, the legacy of abortion politics continues to shape the practice of ARTs (Thompson, 2016).

After *Roe v. Wade*, with mounting pressure from activists advocating for the protection of the embryo, government officials avoided the difficult issues surrounding the government’s position with regards to embryos by banning federal funding for embryo research, which confined embryo research and fertility clinics to the private medical marketplace(Thompson

2016; Wertz 2002). This resulted in fertility treatments being largely paid for out-of-pocket³, thereby limiting access to those with the financial means, predominantly white, wealthy, educated women (Bell 2010, 2014; Chandra and Stephen 2010; Jain 2006; Jain and Hornstein 2005). Issues of unequal access to fertility treatments are a continuation of a long history in US healthcare policy that, unlike other advanced industrialized countries, does not provide universal healthcare coverage, and limits treatments to those who can afford them. Colen (2009) uses the term "stratified reproduction" to describe such inequalities in reproduction where certain groups' reproductive capacities are valued and encouraged and others are restricted.

Federal restrictions on embryo research do allow for researchers of privately-funded embryo research to procure embryos from fertility clinics that routinely discard them⁴ (Thompson 2016; Wertz 2002). But advances in stem cell research that made it possible to derive stem cells from human embryos complicated matters. In 2001, George W. Bush, an evangelical Christian, limited federally-funded embryo research to existing stem cell lines on the grounds that research creating new stem cell lines destroys life. He vetoed subsequent efforts to lift restrictions on human embryonic stem cell research. In a 2007 press conference, Bush showcased children who originated as frozen embryos in fertility clinics, referring to them as "snowflakes" to underscore claims of the uniqueness and sanctity of frozen embryos as people (Stolberg 2007). Bush's restrictions on federal funding of embryonic stem cell research were later overturned under the Obama presidency. Despite their opposing views, however, both Obama's and Bush's policies stipulated that federally funded research must use stem cells derived from leftover

³A handful of states mandate that insurance cover infertility treatments.

⁴ Patients must consent to have their embryos used for research.

embryos created for reproductive purposes in fertility clinics (National Institutes of Health 2009; Wertz 2002).

Although fertility clinics are the source of embryos for contested research and clinics routinely dispose of embryos, IVF technology in the United States is widely accepted as a moral means to achieve the highly-valued possibility of a biological child (Pew Research Center, 2013). The Catholic Church continues to be a lone critic of IVF in the United States. Evangelical Protestants, who typically join Catholics in advocating for the protection of the embryo, are vocal in their opposition to the use of embryos in research, as Bush's policies illustrate. However, evangelicals have largely been silent about the fate of embryos *within* the bounds of the fertility clinic. Roberts (2007) argues that the discourse of "life ethics" in the United States about whether or not the embryo is human life, counterintuitively allows for embryos to be viewed as transferable entities, and as valuable resources for biotechnology. For those who ascribe personhood to embryos, extra embryos from treatment cycles in fertility clinics can be donated and "adopted" by other families. For those who do not view embryos as human life, they can become valuable material resources for the life-improving aims of stem-cell research.

The Study

In such a politically-charged climate as that which prevails in the United States, where vexed debates about whether embryos and fetuses constitute human life are so entrenched in our daily lives, it is somewhat surprising that the loss of embryos in fertility clinics has seemingly flown under the radar of conservative Christian groups such as evangelicals, despite their fervent right-to-life views. Although they do encourage the "adoption"⁵ of frozen embryos that might

⁵<https://www.nightlight.org/>

otherwise be discarded or frozen indefinitely, they remain largely supportive of IVF. While we know much about the views of conservative Christians with regards to abortion (Ginsburg, 1998; Luker, 1985), what accounts for the uneven outrage over the moral status of the embryo in the context of infertility and ARTs merits further investigation, and is the subject of chapters 3 and 4 of this dissertation. Examining Christian women's experiences with ARTs and institutions of medical and religious authority in the United States provides another vantage point for understanding the 'politics of reproduction' (Ginsburg & Rapp, 1995), which "center attention on the intersection between politics and the life cycle, whether in terms of abortion, new reproductive technologies, international family planning programs, eugenics, or welfare" (Kligman, 1998, 5).

Prior social science research on infertility and ARTs is abundant and has focused on the medicalized and gendered experience of infertility for those who seek treatment and how these technologies can reinforce the "motherhood mandate" (Becker 2000; Franklin 2002; Greil 1991; A. L. Greil, Slauson-Blevins, and McQuillan 2010a; Ragoné 1994; Russo 1976; Sandelowski 1993; Teman 2010; Thompson 2005); inequities in access to ARTs and the class-based experience of infertility for low-income women (Bell 2014; Chandra and Stephen 2010; Jain 2006; Jain and Hornstein 2005); ethnographic studies that use ARTs as a lens to rethinking kinship and challenge the nature/culture binary (Becker 2000; Franklin 2002; Inhorn 1994, 2012, Strathern 1992b, 1992a); feminist critiques of ARTs as instruments of patriarchal control (Arditti, Klein, and Minden 1984; Corea 1985; Rothman 1992), and feminist responses to that position that highlight users of ARTs as agentic actors (Becker 2000; Franklin 2002; Greil 1991; Inhorn 2012; Teman 2010; Thompson 2005); and, finally, the global diffusion of ARTs from Euro-American contexts and the diverse meanings and practices of these technologies in local

contexts around the world (Bharadwaj 2006; Birenbaum-Carmeli and Inhorn 2009; Handwerker 2002; Inhorn 1994, 2012; Inhorn and Balen 2002; Inhorn and Birenbaum-Carmeli 2008; Kahn 2000; Paxson 2004; Roberts 2012; Teman 2010; Thompson 2006). But we still know very little about religious people's experiences with ARTs in the United States, despite its uniquely high levels of religiosity compared to other wealthy nations, and a thriving, yet largely unregulated, multibillion-dollar IVF market (Henig, 2006; Pew Research Center, 2002). Approximately 70% of Americans identify as Christian, and white, evangelical Protestants comprise approximately 30% of U.S. adults (Pew Research Center, 2015).

This dissertation examines the infertility narratives of 75 Catholic and Protestant women. The increasing use of ARTs has raised moral and ethical questions, around the creation of embryos that are discarded or otherwise do not survive the IVF process, as well as around the large-scale freezing of embryos in storage facilities. While conservative Protestants and the Catholic Church have been vocal about protecting the embryo in their opposition to abortion and stem cell research, their positions regarding ARTs diverge. Protestant denominations generally support the use of IVF and have largely remained silent about ethical or moral concerns in this sphere. Catholicism, on the other hand, is the most restrictive world religion in its position on ARTs. For example, in 2011, a teacher at a Catholic school in Indiana was fired for using IVF (Redden 2014). I examine how Christian women navigate the moral dilemmas that emerge when the pursuit of biological parenthood leads to encounters with technologies that threaten what they consider to be sacred.

Given the state and stakes of reproductive politics in the United States, it is critical to understand how those who identify as religious—and have a powerful voice in these debates—understand, practice, and invest meaning in reproductive technologies. Religious women negotiate not only

wider cultural messages about gender, infertility, and ARTs, but also their religion's positions on these issues. These personal negotiations are moments of contesting, reproducing, and reconfiguring cultural values. They also illuminate how religion is practiced in everyday, contemporary American life (Ammerman 2007). This study explores the "facts" of life as infertile Christian women understand them. As anthropologist Carol Delaney put it, "although the questions [about the origins of life] may be universal, the answers are not" (Delaney 1991).

Summary of Chapters

In Chapter 2 I provide an overview of the Catholic Church's position on ARTs and explore the strategies that devout Catholic women use to negotiate their religious beliefs and desire for a child given their Church's restrictions on the use of ARTs and the broader society's widespread acceptance of them.

The Catholic Church's veneration of motherhood and family and its restrictive position on ARTs creates potential moral dilemmas for those who adhere to Church doctrine. They are members of a broader secular society that supports the use of ARTs, but they are also adherents of a religion that emphasizes motherhood while restricting the technological means for achieving it. How do these women reconcile being outsiders who do not meet the expectations of their religious and secular communities?

My interviews with devout women are revealing of this double bind. They feel judged by their Church communities for not having children, and they feel isolated from secular society for considering ARTs to be immoral. Yet, despite religious traditions often compounding the larger societal pressure for women to be mothers, devout women value the limitations placed by the

Church on the use of ARTs. In many ways, the religious restrictions provide a sense of meaning and stability as women grapple with profound uncertainty. Religion allows devout women to refuse technologies, but it also allows them to rework their sense of what it means to be a Catholic woman who is unable to have a biological child—a process I describe as achieving a *moral femininity*. Devout women attain this by drawing on biblical stories and Church teachings that allow them to embrace their suffering as meaningful and construct alternative maternal identities. In doing so, they reconceptualize themselves as feminine women and mothers in ways that transcend biological fertility. Their rejection of ARTs becomes a testament of their devotion to God that results in a deepened piety. They become “moral guardians” working to protect the natural social order as ordained by God. Thus, while religion increases the burden of reproduction for devout women, it also provides the cultural resources to resist the financial, emotional, and physical difficulties experienced by women who use ARTs.

In Chapter 3 I turn to evangelical Protestant women's experiences with ARTs and explore how evangelical women who ascribe personhood to the embryo make sense of the embryo loss that routinely occurs in the IVF process, through embryos being discarded, not surviving the thawing process, or not implanting into the woman's uterus after embryo transfer to her body. I found that for many of the women, a deep opposition to abortion on the grounds that it destroys life and a belief in the personhood of the embryo coexisted with a reluctant acceptance of embryo loss under certain circumstances when using ARTs. From my perspective as an outsider to their religious and political worldviews, these were perplexing tensions. Exploring them further provided insights about the circumstances under which the embryo is imbued with moral significance, and how gendered ideals were central to the women's reasoning.

Evangelical women's narratives about infertility and ARTs were suffused with gendered enactments of culturally valued forms of femininity. Mobilizing these gendered ideals prepared them to envision themselves as mothers, enabled the achievement of attachments and kin relations that the women longed for, and helped to resolve the moral tensions that arose embryo loss was in tension with these very gendered ideals. While these attachments made embryo loss more emotionally difficult to bear, many nonetheless considered embryo loss to be undesirable but at times inevitable in their pursuit of motherhood.

To explain why embryo loss was morally permissible in IVF treatments, women described their intention as the creation—not the destruction—of embryos, thus embracing rather than rejecting motherhood. Some framed embryo donation in altruistic terms, seeing it as helping couples in need or furthering scientific knowledge, while others viewed it as a form of abandonment. Those who adopted embryos often saw themselves as rescuing children in need. By drawing on cultural ideals of femininity in their moral reasoning, the women constructed themselves as deserving of motherhood.

These personal negotiations shed light on larger debates about when and why embryo loss becomes a moral issue. The meaning and status of the embryo is contingent and contextual in evangelical women's narratives. The nuances in their moral reasoning about embryos reveal that the fertility clinic and its largely white, middle-class clientele are shielded from the moral condemnation that abortion clinics face, because in the former, the loss of embryos occurs in a space where women are striving to become mothers. This study suggests that the fertility clinic and the abortion clinic—and their patients and practitioners—occupy different spaces within the moral hierarchies of the stratified system of reproduction.

In Chapter 4 I compare devout Catholic and evangelical Protestant women's understandings of ARTs to further explore their different approaches to this technology.

Catholic and evangelical Protestant women had different views on how life should be created and different understandings of the roles and relationships between God, technology, and themselves as co-creators of life. For evangelicals, the technology was a collaborative co-creator within the bounds of nature. For Catholics, the technology disrupted the natural order by supplanting God's role in life's creation. Their divergent understandings of ARTs lead to different ways of relating to embryos as life. Catholic women viewed the embryos as life that should be protected in absolute terms. Evangelical Protestant women had a more contextual and contingent approach to the status of embryos as life. Embryo loss was unfortunate but permitted when the purpose of using the technologies was family building. But when medical treatments result in failure, I find that Catholic and evangelical narratives converge when they move toward non-biological approaches to family building such as adoption.

These findings suggest that these two groups of women, who are often considered to have uniform positions regarding the moral status of the embryo as life in their “pro-life” position, actually have distinct views on how life should be created and the circumstances under which its loss is permissible or not, the limits of technology, and God’s relationship to technology. This study contributes to our understanding of how religious sensibilities mediate one’s relationship with ARTs in diverse ways. Different conceptualizations and configurations of life, nature, and technology informed each group of women’s accounts of ARTs. These two forms of engagement with ARTs—refusal or acceptance—both produced emergent religious moralities of Christian womanhood.

In the final chapter, I summarize and expand on my findings, their implications, and contributions.

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CHAPTER 2

Moral Women, Immoral Technologies: How Devout Women Negotiate Gender, Religion, and Assisted Reproductive Technologies

Introduction

Sexuality, gender, and reproduction are sites in which what is “natural” and “morally acceptable” are perpetually contested. Advances in assisted reproductive technologies (ARTs) such as *in vitro* fertilization (IVF) pose a challenge to the idea of “natural” procreation. For some, this challenge has been largely overcome. While ARTs were not widely accepted 30 years ago, they have become part of the normal means by which life can be created (Becker 2000). Their use has doubled in the last decade, underscoring the importance of biological¹ motherhood (Becker 2000; Centers for Disease Control and Prevention 2012). Studies on the experience of infertility show that one’s identity as a woman is often defined by the ability to have a biological child (e.g., Becker 2000; Greil, Slauson-Blevins, and McQuillan 2010; Ireland 1993; Ridgeway and Correll 2004), which is “reified as the gold standard of motherhood” (Martin 2010, 540). This results in a “cataclysmic role failure” for women who desire but are unable to have children (Greil, Leitko, and Porter 1988, 191). Women with access to ARTs thus often feel compelled to use them (Sandelowski 1991). But some are still unable to bear a child, because they may not have access to ARTs (Bell 2009), the treatments may fail (Becker 2000; Throsby 2002), or they may not pursue ARTs at all. These women must then work to “redefine normalcy” (Becker 2000) via other forms of parenthood or by expressing other forms of “normative femininity” when childless (Throsby 2002).

Missing from the literature on infertility in the U.S. is any consideration of how religion shapes the process of negotiating infertility and gender. Yet, religion is replete with beliefs and teachings about reproduction, gender, and sexuality. For many, religion matters and plays a potentially critical, unexplored role in how women navigate messages about infertility and gender. Importantly, religious women negotiate not only wider cultural messages about gender, infertility, and ARTs, but also their religion's positions on these issues. The Catholic Church provides an especially critical case for examination because it venerates motherhood and family but is the most restrictive world religion in its position on ARTs, creating potential moral dilemmas for those who adhere to Church doctrine. Devout women are members of a pronatalist society that supports the use of ARTs, but they are also members of a religion that emphasizes motherhood while restricting the technological means for achieving it. How do these women reconcile being outsiders who do not meet the expectations of their religious and secular communities?

Given the importance of religious considerations in determining the moral acceptability of ARTs, it is surprising that neither sociologists of religion nor medical sociologists have addressed how this potential site of conflict between two institutions of authority—medicine and religion—may affect women's experiences of infertility. Numerous studies have examined the medicalized experience of infertility (Becker 2000; Franklin 1997; Greil 1991; Greil, Slauson-Blevins, and McQuillan 2010; Modell 1989; Sandelowski 1993; Thompson 2005), but these studies primarily examine people *after* they have already decided to pursue treatments and thus fail to capture the experiences of those who refuse treatments. Thompson describes the only person who left treatment (for non-financial, non-medical reasons) as having the “unusual commodity” of religion (Thompson 2005, 94).

Medical anthropologists have written extensively on religion and ARTs, but these studies are primarily limited to non-Western contexts. We know little about how religious people experience ARTs in the U.S.—a country with uniquely high levels of religiosity and a thriving IVF industry. The U.S. is thus a fruitful site for examining the intersection of religion and medicine— institutions that both have distinct views on how life can legitimately be created. This study asks: Given the widespread acceptability of infertility treatments forbidden by the Catholic Church, what strategies do devout women use to negotiate their religious beliefs and their desire for a child? How does religion shape their efforts to make sense of ARTs, infertility, and gender identity?

The study highlights devout women’s distinctive understandings of ARTs and experiences of infertility. In comparison with the women in most treatment-based studies, I argue that devout women occupy a unique position of navigating two sometimes contradictory cultural schemas (Sewell 1992) regarding the meaning of ARTs in the U.S. Drawing on both religious and secular schemas, devout women’s experiences of infertility are both medicalized as a biomedical problem (Greil 1991) *and* infused with religious meaning. Religion allows devout women to refuse technologies, but it also allows them to rework their sense of what it means to be a Catholic woman who is unable to have a biological child—a process I describe as achieving a *moral femininity*. Devout women attain this by embracing suffering as meaningful and constructing alternative maternal identities. Their rejection of ARTs becomes a testament of their devotion to God that results in a deepened piety. They become “moral guardians” working to protect the natural social order as ordained by God. Thus, while religion increases the burden of reproduction for devout women, it also provides the cultural resources to resist the financial, emotional, and physical difficulties experienced by women who use ARTs.

The Catholic Church and Assisted Reproductive Technologies

The Catholic Church's opposition to ARTs is articulated in the instruction *Donum Vitae* (Respect for Human Life in Its Origin and on the Dignity of Procreation). First, marriage is a sacrament—a ritual signifying God's presence—and procreation within marriage is a sacred act in which couples co-create *with* God (Congregation for the Doctrine of the Faith 1987). Children are considered a gift from God created when the corporeal and spiritual unite during intercourse. In the laboratory, the divine nature of procreation is ruptured, as scientists supplant God as the creators of life. In contrast to embryo formation within the womb, the laboratory environment is not considered respectful to human dignity or divine intention (United States Conference of Catholic Bishops 2009).

The Church is not entirely opposed to science and technology. Artificial insemination is not prohibited as long as it does not replace the conjugal act. The Church permits the use of a perforated condom to collect semen during intercourse that can later be used for insemination. In addition, NaPro (Natural Procreative Technology), developed by a Catholic doctor, is a Church-sanctioned infertility treatment that teaches women to monitor their cervical mucus and track fertility. Surgical procedures such as laparoscopic diagnostic techniques, hormonal therapies, and medications are also permitted to address imbalances.

Unlike Judaism and Islam, Catholicism does not privilege biogenetic kinship (Inhorn 2003; Kahn 2000), and thus infertility is not a legitimate reason for divorce. Biological reproduction remains the cultural ideal, but it is not mandated and alternatives such as adoption are valued.

Religious Schemas and Reproductive Dilemmas

I develop Sewell's (1992) "schemas" in order to understand how devout women develop understandings of ARTs distinct from those of women in previous treatment-based studies. I categorize schemas as "religious" and "secular" for analytical purposes, but acknowledge they can overlap, complement, or contradict each other. Religious schemas are understood as interpretive frameworks that shape how people experience and act in the social world (Ogland and Bartkowski 2014). Sociologists of religion have used schemas to understand how religion influences people's views on sociopolitical issues, moral judgments, and behaviors (e.g., Bartkowski et al. 2012; Hoffman and Bartkowski 2008; Ogland and Bartkowski 2014). But studies of religious people's attitudes reveal little about how beliefs are put into practice by people actually experiencing moral dilemmas, or how the salience of schemas may vary throughout the course of these dilemmas. In this study, I show how devout women use religious schemas to reason through dilemmas that extend beyond a discrete moment in time.

We also lack research examining how gender shapes the process of moral reasoning. Decisions about using reproductive technologies are shaped by gendered ideologies that link womanhood to the ability to bear children, and reproductive technologies that are particularly invasive toward women's bodies. This study expands our understanding of the role of religious schemas by moving beyond attitudinal and behavioral measures and incorporating gender not simply as a variable, but as actually shaping the process of moral reasoning. I show how devout women navigate secular and religious schemas that inform their understanding of what it means to be a woman, their infertility, and their relationship with God.

To understand how religion shapes one's experience with infertility, I draw on studies of religion and gender, literature on the experience of infertility, and studies on religion and ARTs.

Religion & Gender

Sociological studies of religion and gender challenge stereotypes of religious women as “doormats” (Stacey and Gerard 1990) by showing how women strategically use religion to find solace from the contemporary demands of modernity, empower themselves through reinterpreting doctrine, and navigate their workplace and family life (e.g., Chong 2008; Davidman 1991; Gallagher 2003; Griffith 1997). Avishai cautions, however, that efforts to highlight religious women's agency still often fail to recognize “religiosity *for the sake of religiosity*” as agentic (Avishai 2008, 429). Building on Mahmood's (2005) concept of “pious agency”—cultivating a pious self through religious practice—Avishai develops the “doing religion” framework to understand religious conduct as a “mode of being, a performance of religious identity” where agency is expressed as compliance towards religious ends (2008, 410).

This approach challenges Western secular-liberal conceptualizations of agency rooted in the rational, self-interested, autonomous liberal subject, either unmoored from or actively resisting institutionalized authority (Avishai 2008; Mahmood 2005). Yet many religious people simultaneously share these Western, liberal desires for autonomy and individualism while *also* seeking self-transcendence and a relationship with God. These sometimes contradictory desires must be reconciled, and people synthesize religious and secular schemas in meaningful ways that make distinguishing religious from extra-religious ends difficult. In this study, I extend our understanding of religion and gender by examining how devout women navigate religious and secular schemas to construct their identity as devout women experiencing infertility in the U.S.

Medicalized Experiences of Infertility

Most studies of infertility in the U.S. capture the experiences of those already pursuing treatments (Becker 2000; Franklin 1997; Greil 1991; Modell 1989; Sandelowski 1993; Thompson 2005). These studies describe ARTs as having a “pulling” effect on infertile women that “compels” their use, even when unsuccessful, given the highly valued possibility of a biological child (Franklin 1997; Greil 1991; Sandelowski 1991). Women who can afford treatments feel compelled to use them, and experience shame for not “trying” if they do not (Sandelowski 1991, 32).

A few of these treatment-based studies (Greil 1991; Sandelowski 1993) reference religion. Sandelowski found that religion was most meaningful for less advantaged women who were less treatment-oriented and believed conception was “in God’s hands” (1993). Greil found that people in his study were unable to draw on religion in meaningful ways to make sense of their infertility (1991). Thompson’s (2005) ethnography of infertility clinics is one U.S.-based study that noted the dilemmas religious people face with ARTs. She describes the rare refusal of infertility treatments by a Mormon woman, and an Orthodox Christian couple who invited a priest to the clinic to discuss how IVF could be done in accordance with religious teachings. These important but limited glimpses into religious people’s experiences with ARTs point to a gap in our understanding and highlight the need for more focused research.

Religion & ARTs

Depictions of religion and science as conflicting have been challenged by scholars examining their intersection in the practice of assisted reproduction around the globe (e.g., Bharadwaj 2006; Inhorn 2006; Inhorn and Birenbaum-Carmeli 2008; Kahn 2000; Paxson 2004; Roberts 2012;

Temam 2010; Thompson 2005). In Israel, religion and science work together to fulfill pronatalist policies. With Rabbinical laws that accommodate the use of ARTs and government-sponsored IVF treatments, Israelis are the highest per capita users of IVF (Inhorn and Birenbaum-Carmeli 2008; Kahn 2000). Roberts (2012) shows how IVF in Ecuador is not only accepted by Catholics, but that religion is invoked as a form of assistance in “God’s laboratories.” Inhorn’s work in the Muslim Middle East shows how religious prohibitions raise concerns about being a “good Muslim” when considering ARTs (Inhorn 1994, 2003). Paxson (2004) shows that despite the Greek Orthodox Church’s religious prohibitions, women “naturalize” IVF by transforming their suffering into expressions of atonement. These studies reveal that religion and science interact with each other and other systems of meaning and belonging in everyday life. This study builds on these analyses in order to understand how religion, gender, and science intersect in the experiences of devout Catholics in the U.S.

Methods

To understand how Catholic women experience infertility and ARTs, I conducted in-depth, semi-structured interviews with 33 Catholic women² who experienced infertility. I recruited participants who responded to flyers posted at fertility clinics, cafes, Catholic Social Services, and grocery stores, and online via Craigslist, infertility blogs, and forums. I limited recruitment to Catholic, infertile women ages 18–50³ who had considered infertility treatments. One non-Catholic woman who was married to a Catholic man asked to participate and was included.

Thirty-two of the respondents were U.S citizens from across the country. One interviewee was from Latin America. The median age of interviewees was 33. Thirty of the respondents identified as Caucasian, one as African-American, and two as Hispanic. Twenty-eight women

were employed and five were stay-at-home mothers. The sample is predominantly middle-to-upper-class, white, college-educated women from the United States. Apart from the three non-white respondents and devout women's education not being high relative to the general IVF population in the U.S (Chandra and Stephen 2010), the demographic profile of my sample is similar to that of clinical samples from prior research. In this study, I focus on the more than half of the sample that is devout (n=20). Any comparison between devout and non-devout women is limited because non-devout women experienced infertility for a significantly shorter time (median = 2 years) than devout women (median = 5 years). When appropriate, however, I include experiences of the non-devout women as a point of comparison.

Sociologists of religion agree that religiosity is multidimensional and complex. Commonly used measures of religiosity are beliefs, salience, and practice (Pearce, Foster, and Hardie 2013). In this study, I used three measures of religiosity that reflect one's commitment to the Church and the strength of one's Catholic identity (D'Antonio et al. 2001): frequency of Church attendance, frequency of confession,⁴ which is the sacrament of reconciliation, and response to an open-ended question on the importance of religion in one's life. Comparing women in the sample using these measures resulted in two groups that I describe as devout and non-devout. Women were classified as devout if they attended Church at least once a week, confessed at least once a year, and used words such as "very" or "extremely" to describe the importance of religion in their lives. All but one devout woman reported that they attend confession at least once a year; this woman self-identified as devout in a follow-up questionnaire. Women who were classified as non-devout either never attended mass, attended on holidays, or attended monthly. Only one non-devout woman participated in confession, but she attended mass only monthly and described religion as "somewhat important." One non-

devout woman identified religion as “very important” to her, but also described herself as “not strongly religious.” She attended church monthly and did not participate in confession. Non-devout women typically described themselves as “not very religious,” “casual,” “moderate,” or “non-practicing” Catholics.

To further verify my classification, I sent a follow-up questionnaire to participants to allow them to self-identify as devout Catholics or not. I asked, “Would you consider yourself to be a devout Catholic?” and provided room for an open-ended response. Twenty-three people responded to the follow-up, with all confirming my classification except one subject, whose classification I adjusted accordingly.

I conducted thirty of the thirty-three one- to two-hour interviews by telephone. I asked participants about their family backgrounds and the importance of religion in their lives, their experience with infertility, marriage, interactions with doctors, and their thoughts on ARTs. After each interview, I asked participants to complete a short demographic questionnaire.

All interviews were transcribed verbatim. I read the transcripts and identified major themes: artificial/natural, marginalized experience, children as gifts, God’s plan, suffering, reconciling strategies, and Catholic identity. Within these themes, I used ATLAS.ti software to create codes. I used both open and focused coding (Emerson, Fretz, and Shaw 1995). The coding process was iterative, as I used the data to develop initial ideas in combination with initial “hunches” I formed during the interview. These ideas were written and developed in memos.

At the end of the interviews I was often asked if I was Catholic and infertile. I responded that I am a non-practicing Catholic who grew up in a Roman Catholic family, and that I have not tried to conceive. I was also sometimes asked what I was “looking to prove.” When I explained

that I was looking to understand their experience, many seemed relieved. They expressed concern about being portrayed in a negative light, with some even saying, “I’m really not stupid” when describing their reluctance to use ARTs. Other than within their online community, devout women often felt misunderstood and utterly alone and were delighted that someone wanted to hear their story.

The research process was sometimes perplexing, and my experience of it is difficult to articulate. These women have political and religious beliefs different from my own. But their openness quickly dispelled any anxiety on my part about being a “different kind of woman,” and I even found myself questioning and reconsidering some of my own beliefs. In *Contested Lives*, Ginsburg puts into words my own experience: “Doing research...often felt schizophrenic...Like internal tectonics, the layers of my own thought and unexamined beliefs began to shift and collide and take new shape in relation to the people I was struggling to understand” (Ginsburg 1998, xxxiv). This experience assisted in understanding these women and the common struggles and contradictions we experience in our daily lives that transcend religious and political affiliations. These women are negotiating their life “disruptions” within the constraints of their particular situation. I hope I can relay these women’s stories as meaningfully as they related them to me.

Devout Women’s Narratives of Infertility

Women in this study and prior studies on infertility share a strong desire for children and a confidence in scientific progress and medical technologies. Both groups of women typically begin their infertility journeys by seeking medical solutions. But when the next line of treatment involves technologies that the Church forbids, devout women’s treatment trajectories become

distinct. I show how devout women draw on religious schemas in order to avoid the use of ARTs, while also achieving a *moral femininity* not rooted in biological motherhood. First, I show that the Church's veneration of motherhood and its silence regarding infertility amplifies the suffering of those who are without children. Those who refuse ARTs feel isolated from the broader society in which their use has become normalized, even expected. Second, I show how devout women draw on religious teachings about procreation to construct some reproductive technologies as artificial and others as natural. Third, religious schemas provide a means to critique the commodification of reproduction by understanding children as a gift from God, as opposed to a right. Fourth, by attributing their infertility to a "greater plan," devout women are able to move beyond a strictly biological understanding of infertility and find meaning in their suffering. Finally, they draw on religion to construct alternative maternal identities not defined by biological motherhood.

"All Mothers Must Be Important"

Prior research shows that those who are more religious are less accepting of childlessness and have stronger beliefs regarding the importance of motherhood (Greil et al. 2010). The Church plays an important role in how Catholic women think about motherhood. One devout woman explained, "[Motherhood] is a very important part of life, of femininity, of a marriage. Of actually being a co-creator with God...I see it as a very natural part of Catholicism." Another woman described the Virgin Mary as an exalted model of motherhood: "If the Blessed Mother is important, then all mothers must be important." Because the Church is family-centered and infertility is rarely acknowledged by their local priests, most women felt like outsiders at Mass. Some felt judged for not having children, as one devout woman described: "People wonder, 'Are they not really good Catholics? Are they on contraception?'" Women opposed to ARTs

must also contend with broader society's embrace of these technologies, as one woman explained:

You're living in a society that not only does what you can't do, but thinks it's a huge blessing and medical advance and a procedure given to us by God...So you have to deal with that on top of everything... You can't just go to generic support groups; you can't go to a generic blog online... You realize, "I'm totally alone...everybody else I know can do IVF."

Devout women are thus in a double bind. They face pressures from society and their religious community to have children, but they feel judged by their Church community and isolated from secular society for refusing ARTs.

“Playing God”: Differentiating the Natural and the Artificial

Prior studies on infertility show that women pursuing ARTs struggle with their inability to conceive “naturally” (Becker 2000; Franklin 1997; Greil 1991; Inhorn 2003; Sandelowski 1993; Teman 2010; Thompson 2005). Some naturalize elements of ARTs to achieve desired kin relations and identities—an approach Thompson (2005) terms “strategic naturalization.” I show how devout women construct ARTs as artificial and “strategically naturalize” medical treatments that are compatible with Catholic doctrine. Marilyn, a devout, 34-year-old writer living in a Boston suburb who suffered from primary infertility for four years, described IVF by contrasting it with “natural” procreation:

I just feel like IVF demeans a person so much, because the conception happens not in the throes of love, but rather in a scientific laboratory and it just sounds so disgusting to me...they're not embracing each other, and they're not participating in this great procreative act.

For Marilyn, IVF eliminates the sanctity of intercourse within the marital union. According to the Church's instruction of *Donum Vitae*, this threatens not only "natural" reproduction, but also the moral foundation of society (Congregation for the Doctrine of the Faith 1987).

Though opposed to ARTs, devout women do pursue medical treatments that they "strategically naturalize" as facilitating procreation within marital intercourse (Thompson 2005). NaPro, a technology that purports to monitor and maintain a woman's reproductive and gynecological health, for example, provides a morally acceptable alternative because procreation remains within the bounds of marital intercourse. Margaret, a 30-year-old manager suffering from primary infertility for a year, explained why she prefers NaPro:

I left the reproductive endocrinologist, and that's one thing I liked about the NaPro doctor. He would never perform any artificial reproductive procedures. He focused on diagnostics and helping me fix the problem from a hormonal and medical kind of way.

Margaret naturalized NaPro by contrasting its "medical" treatment with the reproductive endocrinologist's "artificial" procedures. Devout women view NaPro as preparing the spousal bodies for procreation through intercourse. One woman explained, "They must make your body so healthy that the result of sex is a baby." Biomedical and religious frameworks converge and provide a way for devout women to "fuse their modern bodies with their Catholic souls" (Hirsch 2008, 95).

The boundaries between the natural and the artificial are complicated by the fact that while the Church explicitly opposes most ARTs, its position on intrauterine inseminations (IUIs) is undefined. Nonetheless, all but two devout women chose *not* to use IUIs. Kayla, a 35-year-old banker from New England, suffered from primary infertility for one year. She described an IUI

as *almost* “natural” if using a Church-approved perforated condom to collect semen during intercourse, but even she ultimately decided against the method:

I think the Church is undecided. So I was telling myself that [IUI] would probably be as far as we’d go because we weren’t harming any life. It was not quite natural, but if he used a condom with a hole in it for collection and we had sex, it would still be the act, and you would never really know. So I kind of worked my way around that, but in the end we canceled the appointment. We just weren’t comfortable with it.

But Kayla also expressed doubts about her decision: “After I’ve seen ten women that go on to have IVF and now they have babies, I think, am I making a huge mistake?” Her desire for a child and the cultural acceptance of ARTs by other women contributed to her moral uncertainty.

Audrey, a 40-year-old manager suffering from primary infertility for twelve years, described engaging in “private negotiations” with God (Hirsch 2008). She knelt down to pray before her insemination and held a concealed rosary during the procedure. She explains that an IUI is not “playing God” because it is just moving the sperm “closer.” By having sex post-procedure, it is unclear if the artificially inseminated semen or the semen from intercourse will reach the egg. Conception is still in God’s hands, as Audrey explained: “[IUI is] not really anti-Church. It’s taking his sperm and putting it closer to my egg. You were told to go home and have sex. So was it the sex? Which sperm cell is it?” Audrey’s reasoning resonates with that found in other studies outside the U.S. on religion and ARTs that similarly emphasize God’s role in the technology’s outcome (Bharadwaj 2006; Inhorn 2003; Paxson 2004; Roberts 2012).

Non-devout women in this study naturalize IVF in ways that are similar to clinic-based samples from prior studies. Christine, who described herself as “not religious,” suffered from premature ovarian failure for one year. She understood IVF as assisting nature: “Basically, [IVF

is] just like additional help, right? I would do it. I think we're very fortunate to have that ability to do that. I wouldn't even think twice about that."

Both non-devout and devout women expressed uncertainty or objected to the use of donor semen and eggs. While devout women framed their objections as "playing God," some non-devout women described the use of donor egg or sperm as "weird" or "strange." Adopting an embryo or traditional adoption were considered better alternatives. Christine, who had no qualms about IVF, was opposed to using an egg donor. But it was her only option, as she described:

I don't want someone else's egg. I feel really weird about it and uncomfortable. I don't like the idea at all... People do what they have to do. I'm one of them. I'm considering something that I would have never ever considered. We do these crazy things so that we can be mothers.

Both devout and non-devout women described feeling it would be unfair—even akin to adultery—to use donor eggs or sperm. They wanted the embryo to be completely genetically related to the couple or not at all. One non-devout couple decided to use their respective siblings as donors so that their child would be genetically related to each spouse. They "strategically naturalized" their siblings' donor gametes so that each spouse could establish an "equitable" genetic affinity to the child.

Non-devout women were less concerned with the Church's teaching that procreation must occur within marital intercourse, though they did express concerns about the moral status of the embryo. In response to critiques of "playing God," non-devout women often cited their good intentions when using IVF. Celeste, an editor from a Midwestern city who was undergoing IVF for male-factor infertility, reflected:

I truly don't want to be "playing God"... I feel that we're trying to do things out of love... I really don't want to destroy life, and I do believe that clearly is life... Not to boil this down to something odd. But it's like endangered species... Sometimes people have to do things to procreate that maybe weren't the way it was supposed to happen.

Like many non-devout women, Celeste characterized undergoing IVF as an expression of love for her husband. Non-devout women undergoing IVF also naturalized embryo disposition, as one woman described: "These embryos weren't killed; they just happened to die, and a lot of embryos die in nature too..." Others limited the number of eggs they would fertilize in order to prevent dilemmas over embryo disposition. Leah, a non-devout scientist who grew up in a devout family, drew on science to reason through embryo disposition: "I think the biologist side of me that thinks they're just cells—I'm not completely convinced they're just cells—but they're not that different from my skin cells." She uses a scientific framework that is salient in her everyday life to reason through a moral gray area.

The U.S. IVF industry thrives on cultural ideologies of individualism, persistence, and technological progress (Becker 2000). The pursuit of reproductive technologies has become an imperative for many middle-class women (Sandelowski 1991). The ARTs industry has been critiqued by some for commodifying women's bodies and reproduction,⁵ but patients resist such commodification by engaging in objectification and medicalization of their bodies in strategic ways (Becker 2000; Greil 2002; Teman 2010; Thompson 2005). Thompson describes this as "agency through objectification," wherein technology becomes a tool for patients to achieve their identity as parents (2005,183).

Devout women critique IVF by defining a child as a gift from God rather than a right. They describe the ART industry as a business that commodifies (future) babies, to which people then feel entitled. Carmela, a devout 34- year-old lawyer from Houston who has primary

infertility and has pursued adoption, reflected: “A child is a gift. It is not a given. Because you want a child doesn’t mean that you have to have it, and that you have to do everything to get it and break all of the laws of God and society to do it.” Some secular parents also describe their children as “gifts,” to be sure, but devout women draw a distinction between a divine gift and the right to a child. The concern is that when procreation is delinked from marital intercourse, people are dehumanized in the process and become products in an economic market that focuses on profit and self-interest⁶ (Lauritzen 1993). Kayla, like many devout women, perceived her doctor as taking advantage of vulnerable women in order to increase profits: “You tell them that it’s your religion, that this is your moral decision, and they don’t respect it...the way I can describe it is like a used car salesman selling me a car when I don’t even need one.”

By opposing ARTs, devout women critique the commodification of reproduction, which they believe threatens the sanctity of life. They become guardians of the moral foundation of society, as they understand it. Their beliefs, decisions, and actions produce moral selves by preserving the “natural” mode of reproduction based on Catholic doctrine.

Like women in treatment-based studies, non-devout women described IVF as an undesirable but necessary way to have children. They did not voice strong objections to the industry. Ashley, an executive from Nashville who had an unsuccessful IUI after suffering from primary infertility for a year, explained: “Because we have the technology, the outcome is not something that’s wrong. I honestly don’t think God cares how we get our child. We have the technology and he gave someone the gift to come up with this technology.” For many non-devout women, the technology is described as “God-given” and assisting nature (Modell 1989). Another non-devout woman described having a right to a child: “I just feel like everyone should have their right to have a child or children.” Her statement resonates with prior research in which

women described having a right to a family and an obligation to use ARTs to achieve it (Becker 2000; Modell 1989; Sandelowski 1991).

God's Plan: Suffering for a Greater Purpose

Early in their infertility narratives, devout women have confidence in medical treatments and draw on secular schemas regarding biomedical technologies as successful. Like women in prior studies, devout women described wanting to control every aspect of their infertility. They traveled to consult with doctors, read medical journals, and timed, measured, and tested their own bodies. But when IVF was the only option left, they surrendered their control to God. This transition illustrates how biomedical and religious schemas become salient at different moments. It also shows that religious women can value Western, liberal ideals of autonomy while also accepting limitations on their choices and actions. Anna described her transition:

I've always achieved anything I wanted to...And that can give you an ego and make you think that you're doing all this, and that God really isn't part of the equation... Now, with this cross, I've been humbled to the point where I step back and say, "I understand that I'm not in control of this."

This shift was also poignantly captured by Audrey:

Earlier it was, "I wish God would let me know what his plan is for me." Then it was my life is like a tapestry, how one side has the pretty picture and the other side is all ugly with the threads showing. All I can see are the threads. He can see the beautiful parts.

These were common narratives in devout women's accounts. By eventually locating their infertility within a cosmological order, devout women challenged a strictly biomedical understanding of infertility.

This conceptualization of God's plan also allowed women to expand their maternal desires beyond biological motherhood. Framed as part of a divine plan, devout women could

naturalize their adopted child as meant to be. Rina, a 30-year-old stay-at-home mom who struggled with primary infertility for twelve years, reflected:

We looked at it as there's a reason, there's a purpose...now that we have our daughter, a friend said, "Thank God you never were able to get pregnant." She, for me, is...that's the reason that I was waiting for, because I can't imagine not having her. I wouldn't trade pregnancies for her.

Leah, a non-devout woman and scientist who underwent several cycles of IVF, also questioned the reasons for enduring treatments and why she hasn't been able to adopt. She explained that a biological child is symbolic of her love for her husband:

We'll either have a baby or we won't and then we'll adopt—it's simple, right? [laughs]...But you've spent all of this effort... There must be a reason they're doing that, right?...It's because I love my husband very much. He has these wonderful qualities, and I want to be able to give him a child.

Leah also struggled to make sense of her infertility, but its meaning does not extend beyond the material world. While devout women's refusal of ARTs is a testament to their religious devotion, non-devout women's use of ARTs is often described as a testament of love for their spouse.

Devout women draw on religious texts that provide a language of morality and redemptive suffering to make sense of their infertility. They find solace in biblical stories of infertility, which helps them understand Catholic women's "vocation to suffering" (Orsi 1998, 87). Georgia, a devout woman, suffered from primary infertility for six years and eventually adopted a child, whom she now views as a miracle. She reflected:

I'm not just blindly following these rules. I do believe in them... Our faith teaches us that Jesus died on the cross, and we are called to carry our crosses. I read a lot about suffering. Almost all of the greatest saints have had the worst things happen in their lives in these very dark times. It taught me that suffering has value in our lives.

Georgia has used religious writings about suffering to realize the value of her own difficult experience. Another devout woman described how infertility was the perfect cross for God to have chosen for her:

What greater suffering can a woman who has always wanted to be a mother have than not being able to have children? So it was the perfect thing for God to have chosen because it allows us to suffer so greatly that we can redeem ourselves. If I had been paralyzed in a car accident, I would suffer greatly. But to me, that wouldn't to me be as great a suffering as not being able to have children.

Devout women come to understand their infertility as not just a disruption, but as a coherent part of God's plan⁷ for them.

Such religious schemas are not apparent in non-devout women's accounts or those in prior research. Greil writes, "According to the medical model, suffering is not something to be understood but rather something to be conquered"(Greil1991,173). Traditional theodicies were not meaningful for the people in his study. In contrast, devout women in this study not only found their suffering meaningful, but also critiqued the notion that all suffering should be avoided. One devout woman argued:

In the modern world everybody is always trying to relieve suffering. Like, you're suffering from being fat? Try the stomach pill. You can't see? Do LASIK surgery. I'm not denying that I'm very grateful for modern science, but at the same time, some suffering is meant to be, and it helps you grow as a person.

For some non-devout women, however, religion actually increased their suffering. Celestewas undergoing IVF due to male-factor infertility. She described feeling judged by Catholics for undergoing IVF:

Rather than comfort there is judgment and isolation. There is not enough support within the Church for people, and waiting for an unpredictable adoption after we'd been through somuch heartache simply seemed cruel... IVF was the shortest way to achieving the family we always dreamed of having.

Religious schemas were thus most meaningful for those who described themselves as more religious. Trusting God's plan and drawing on women's vocation to suffering helped devout women transition from desiring only biological motherhood to realizing other forms of maternal identity.

Moral Femininity

Becker (2000) shows that when IVF fails, women must redefine normalcy and rework their gender identities. Devout women refuse ARTs and redefine normalcy by drawing on religious schemas such as Catholicism's openness to adoption, marriage without children as still meaningful, and a lack of emphasis on biogenetic lineage. These schemas allow them to expand their expressions of maternal identities beyond biological motherhood.

In their infertility narratives, devout women describe achieving a strengthened Catholic identity and an expanded understanding of their gendered identities. I call this co-construction of their religious and gendered identity a *moral femininity*, in which infertility and the refusal of ARTs become a combined source of value and self-worth—an expression of Catholic womanhood that brings them closer to God. In using the term “moral” I am neither imposing an assessment of one's morality nor essentializing femininity as “moral.” Rather, I use the term to point to the women's sense of their own morality. They reflect on their infertility as a journey towards salvation, through which Church teachings enable them to save their marriages, financial security, and bodies from the effects of fertility treatment. One woman explained, “One couple I knew broke up because of infertility...we had boundaries that allowed us to focus on each other as opposed to throwing our lives into [ARTs].” Devout women expanded their gendered

repertoires by drawing on religion to construct alternative maternal identities when unable to have biological children.

Nine out of twenty devout women in this study eventually adopted or were in the process of adopting (Table 1). But giving up on biological parenthood was a painful process. One devout woman, who suffered from primary infertility for five years, explained, “I had to mourn the loss of my biological child... For the longest time I just couldn’t fathom doing adoption; I almost would rather be childless.” Another woman stated, “Before it was more important to be biological. That was something I had to let go of...it’s not that important to be pregnant and give birth.⁸It is important to be a mother. I would be a mother somehow, some way.” Other women noted difficulties even after adopting, as one woman shared: “Maybe you’re fertile in other ways, but that grief is still there. It’s not as painful, but it’s still there.” Even for those who drew on religious schemas, overcoming their desire for a biological child was not always possible. Audrey, one of two devout women who chose an IUI, explained, “I just felt in my heart that I wasn’t ready for [adoption]. I hadn’t exhausted all options... I had to exhaust everything before I felt in my heart that I could do that.” Such statements reveal the powerful idealization of biological parenthood and resonate with women’s experiences from prior studies (Becker 2000; Modell 1989; Sandelowski 1991).

While the non-devout women in this study were earlier in their infertility journeys, none adopted or were in the adoption process; twelve of thirteen had used ARTs (Table 1). Some wanted to try for a biological child first; one woman explained, “We’re open to adoption, but we wanted our own child. We wanted to try to get a biological child.” For some the experience of pregnancy was most important, while others described the biological connection as being particularly important to their husbands. While non-devout women may eventually adopt, it is

possible that the Church’s support of adoption as a religious calling facilitates this transition for devout women.

Table 1. Catholic Sample Characteristics (n=33)

	<i>Devout</i> <i>n=20</i>	<i>Non-Devout</i> <i>n=13</i>
Education		
<i>High school</i>	1	0
<i>2-year college</i>	0	1
<i>4-year college</i>	11	7
<i>Masters</i>	6	2
Doctorate	0	2
<i>No response</i>	2	1
Household Income		
<i>\$35,000-65,000</i>	2	3
<i>\$66,000-99,000</i>	8	1
<i>\$100,000+</i>	7	8
<i>No response</i>	3	1
Marital Status		
<i>Single</i>	0	1
<i>Married</i>	19	12
<i>Divorced</i>	1	0
U.S. Region⁶		
<i>Northeast</i>	6	3
<i>South</i>	5	4
<i>Midwest</i>	5	5
<i>West</i>	3	1
<i>Other (Mexico)</i>	1	0
Infertility		
<i>Primary</i>	16	10
<i>Secondary</i>	4	3
Use of ARTs, NaPro, Adoption⁷		
<i>Without treatment</i>	(2)	(0)
<i>Medication (e.g., Clomid)</i>	20(2)	13
<i>Artificial insemination</i>	1	1
<i>IUI</i>	2	2(1)
<i>IUI and IVF</i>	0	3
<i>IVF</i>	0	6(1)
<i>NaPro</i>	15(2)	1
<i>Adoption</i>	9(7)	0
Median Length of Time Trying to Conceive (years)	5	2

⁶ All are from “urban” areas according to the U.S. Census classification.

⁷ Parentheses indicate number of women who became mothers. Three women were pregnant at the time of interview. Two devout women (NaPro and without treatment, respectively), one non-devout (IVF).

Devout women were able to construct maternal identities around other forms of parenting, nurturing, and caring. Women drew on Biblical stories of infertility that emphasized women's value aside from biological motherhood, as one woman explained:

There are women who suffered through infertility in the Bible, and that is a source of comfort: Hannah, Elizabeth, saints, or even nuns that give up their fertility because they have been called for something greater. It makes you feel like your life is still worthwhile even if you are not able to have a biological baby.

Carmela, who had a miscarriage and eventually adopted, challenged a strictly medical understanding of her infertility:

I don't consider myself infertile in either sense. Neither in the physical sense because I have a baby in heaven that I'm not able to hold, but I was a mother...because infertile means you don't give fruits, and I think I give fruits in many other ways.

These expanded expressions of fertility and motherhood helped devout women repair their gender identities, untethering their femininity and their status as mothers from biology.

Devout women also constructed alternative maternal identities as protectors of life. Elaina, who adopted, explained: "It's not that the Church is against everything. Actually, we're promoting life by helping women have their babies, by saving babies of abortion, by saving babies from IVF. It's very coherent." Kristine, a 30-year-old scientist from Houston, suffered from primary infertility for six years and eventually adopted a foster child. She described reconceptualizing her own maternal identity: "The key word there is I can be a mother without being pregnant... There are all kinds of kids who need help. I'm always a big advocate. I will always say I'm pro-life. Foster care, NaPro—I'm going to promote it."

Two women became NaPro practitioners in order to teach other couples; they specifically hoped to help others avoid IVF and birth control (to regulate cycles), both of which are

understood as threatening the sanctity of life and marriage. As NaPro practitioners and advocates, the women see themselves as guardians of a natural social order promoting procreation according to Church doctrine.

Devout women are also able to achieve a sense of self-worth and value by focusing on what they see as a righteous path. Elaina explains:

Being Catholic has made my life more difficult. On the other hand, it is an amazing source of value... I'm valued because I value life. Very Catholic people know that we're choosing life by not doing IVF... In that sense, the Church has given me a tremendous source of support.

As “moral guardians of life,” devout women seek to preserve their souls and a divinely informed social order (Congregation for the Doctrine of the Faith 1987). While infertility marks them as potential outsiders in the Church community, their opposition to ARTs and their “bearing of the heavy cross” of infertility transforms them into exemplars of Catholic femininity instead. Women noted, in particular, the recognition of this status within the online community of Catholic infertile women—a place where their suffering, beliefs, and faith were understood.

Conclusion

In both their religious community and in broader society devout women contend with cultural interpretations of gender that conflate fertility and femininity. Devout women also experience a disjuncture between cultural expectations for them to use ARTs and Church doctrine that forbids them to do so. Yet, despite religious traditions often compounding the larger societal pressure for women to be mothers (Greil et al. 2010), devout women *value* the limitations placed by the Church on the use of ARTs. In many ways, the religious restrictions provide a sense of meaning

and stability as women grapple with profound uncertainty. This is not to say that devout women do not still struggle with aspects of their experiences. But they draw on religious schemas to construct moral boundaries around licit and illicit reproductive practices, to come to terms with the failure of medical treatments, and to reconceptualize themselves as feminine women and mothers in ways that transcend biological fertility. In doing so, they are able to recover a sense of womanhood that others experiencing infertility often feel they have lost (Ireland 1993). By “bearing the heavy cross of infertility,” devout women achieve a *moral femininity* as virtuous women who endure suffering for God’s larger plan.

This study bridges and contributes to three literatures that are rarely in conversation. First, it answers the call to shift the marginalized study of gender and religion to a topic of serious sociological inquiry (Avishai, Jafar, and Rinaldo 2015). In the subfield of the sociology of religion, studies have used the concept of religious schemas primarily to understand how they influence religious people’s attitudes, behaviors, and moral reasoning (e.g., Bartkowski et al. 2012; Hoffman and Bartkowski 2008; Ogland and Bartkowski 2014). But these studies do not examine how religious schemas influence people experiencing actual moral dilemmas. This study thus moves beyond attitudinal and behavioral measures to show how schemas are put into practice. Furthermore, past studies that use gender as a variable obscure how gender itself shapes the process of moral reasoning. Women in this study navigate religious and secular schemas regarding motherhood and womanhood that inform their reproductive desires, dilemmas, and decisions. The effect of religious schemas on shaping their gendered understanding of themselves— from feeling inadequate to becoming exemplars of Catholic femininity— evolves over time.

Second, this study contributes to sociological literature on gender and religion and ongoing debates regarding religious women's agency (Burke 2012). One group of studies understands agency as the instrumental use of religion towards extra-religious ends. Subsequent studies challenge this approach by including compliance towards religious ends as a form of agency. In keeping with the latter, I show that devout women can value Western, liberal notions of autonomy and individualism while also valuing religious restrictions and surrendering control in pursuit of self-transcendence. They are able to reconcile these sometimes competing ideas by innovatively synthesizing religious and secular schemas into a coherent narrative that makes their suffering and relinquishing of control meaningful. Prior studies describe women as pursuing either religious or extra-religious ends, but this obscures the ways that religion is intertwined with aspects of one's life outside of formal religious practice. For the women in this study, their stance against ARTs is not an instrumental use of religion for extra-religious ends; it is understood as a religious act in itself.

Third, this study extends the literature on the experience of infertility and the scholarship on gender, religion, and ARTs. Prior studies on infertility are based primarily on clinical samples and show that it is a cultural imperative for middle-class couples struggling with infertility to use ARTs (Sandelowski 1991). Religion does not appear to be meaningful for most couples in these studies (Greil 1991; Sandelowski 1991); this is likely because those who are most conflicted about ARTs never make it to the clinic, or leave (Greil et al. 2010; Thompson 2005). This study thus captures a group being overlooked by current research, and reveals that for some people experiencing infertility, religion matters profoundly. Though they still desire to be mothers and are confident in medical technology, devout women are not "compelled" to use ARTs (Sandelowski 1991). In their own medical treatment, they limit their embrace of technology once

it impinges on procreation occurring within the sanctity of marital intercourse. Prior studies show that couples “strategically naturalize” ARTs (Thompson 2005); devout women also engage in these strategies but draw their boundaries differently. They ultimately embrace their suffering as meaningful—a response not captured in the existing literature. Indeed, neither biomedicine nor U.S. culture at large accord much attention to suffering, other than attempts to eliminate it (Greil 1991). Religion allows Catholic women not only to say “no” to technologies promising a much desired outcome, it also expands their gendered repertoires to include alternative maternal identities. By delinking motherhood and fertility from strictly biological definitions, devout women reconstruct their identities as women, even though the conflation of fertility and femininity remains.

Ultimately, religion is a multi-layered and dynamic part of these women’s lives. It contributes to the pain of infertility in various ways, but also offers cultural resources that help devout women construct meaningful, alternative maternal identities. Like their secular counterparts, devout women display admirable strength in facing the pain of infertility, but their religious beliefs enable them to locate their experiences within a larger cosmological order where God—not the individual—determines one’s destiny. This relinquishing of control is, itself, a meaningful form of agency.

Notes

1. By “biological” I mean biogenetic and gestational.
2. All names and places have been changed to protect confidentiality.
3. There were no noteworthy generational or regional differences.
4. Since a small percentage of U.S. Catholics attend confession regularly, frequency of confession points to a degree of orthodoxy that was useful in making distinctions in my sample.
5. Thompson (2005) provides a thorough review of feminist debates on ARTs.

6. While adoption also entails economic exchange, an adopted child fulfills the Catholic obligation to provide for those in need.
7. They do not view God as making them infertile.
8. The experience of pregnancy was more important to most women in this study than biogenetic ties, the latter being more important to their spouses. As in other studies (Becker 2000; Greil 2002; Inhorn 2003), most marriages were described as having been strengthened through struggles with infertility.

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CHAPTER 3

“I’m trying to create, not destroy”: How Evangelical Protestant Women Navigate Infertility, Religion, and ARTs

Introduction

In the context of issues such as abortion, human embryonic stem cell research, and some forms of contraception, the protection of the human embryo as "human life"⁸ has been a key concern uniting socially conservative evangelical Protestants and Catholics in the United States. This Christian alliance has been a significant force in American politics and policy. The frequent use of Pope John Paul II's phrase, "culture of life,"⁹ by President George W. Bush, an evangelical Christian, highlights this unity (John Paul II 1995). However, the alliance's "culture of life" stance does not align on all issues concerning "life" (Goodstein 2005). Despite pro-life evangelicals' and Catholics' fervent opposition to human embryonic stem cell research, only the latter have taken an official stance against the private, and largely unregulated, market for IVF that is not only the source of embryos for this controversial research¹⁰, but is also a technology that routinely results in embryos being discarded in the pursuit of overcoming infertility.

According to a 2017 report by the U.S. Department of Health and Human Services, there are estimated to be over 600,000 frozen human embryos resulting from fertility treatments in storage facilities across the United States (U.S. Department of Health and Human Services

⁸ The use of "human life" here refers to the full personhood status of a rights-bearing individual.

⁹ From his encyclical, *Evangelium Vitae* "Gospel of Life"

¹⁰ Patients can consent to have their leftover embryos from treatment donated to research. Other options include discarding the embryos, donating them to other patients, freezing them for future use or indefinitely.

2017). While evangelicals have expressed concern about the large-scale freezing of embryos, their solution has been to promote "adoption" of the "orphaned" embryos by other Christian families rather than taking the position of the Catholic Church, which condemns IVF technology as inherently immoral (Lewin 2015; Ratzinger, Joseph 1987).

In a 2006 press conference, Bush expressed his continued opposition to embryonic stem cell research. In order to underscore his belief in the sanctity and uniqueness of frozen embryos as human life, he showcased children who had originated as "adopted" frozen embryos, calling them "snowflakes" (Stolberg 2006). More recently, anti-abortion activists have voiced opposition to the disposal of frozen embryos in custody battles for couples who underwent fertility treatment (Lewin 2016). From an outsider's perspective, pro-life evangelicals' deep opposition to abortion and embryonic stem cell research on the grounds that it destroys life coexisting with an acceptance of embryo loss under certain circumstances calls for further examination.

Existing research on assisted reproductive technologies (ARTs), such as IVF, in the United States has relied on clinic-based samples to examine the gendered and medicalized experience of ARTs and infertility (Becker 2000; Greil 1991; Sandelowski 1993; Thompson 2005). While religion does occasionally surface in these studies (Thompson 2006), religious people's experiences are not the focus of their research, and religion does not appear to play a significant role in patients' experiences (Greil 1991; Sandelowski 1993). One explanation for this is that those with religious concerns about ARTs may not pursue them (Greil et al. 2010). Another is that the highly technological realm of the practice of ARTs in Western contexts is assumed to be a secular space divorced from religion (Elizabeth F. S. Roberts 2016).

Early scholarship on assisted reproduction had been limited to the Euro-American contexts, where fertility clinics are primarily characterized as secular spaces. More recent anthropological studies have intervened by examining predominantly non-Western contexts, and by exploring the diverse imbrications of science and religion in assisted reproduction (Bharadwaj 2006a, 2006b; Birenbaum-Carmeli 2004; Handwerker 2002; Inhorn 1994, 2012; Inhorn and Birenbaum-Carmeli 2008; Kahn 2000; Roberts 2007, 2012). But we still know little about religious people's experiences in Western contexts, and evangelical Protestants' experiences are yet to be examined (Inhorn and Birenbaum-Carmeli 2008).

The present study asks how those who identify as religious experience infertility and ARTs in the United States. More specifically, how do evangelical Protestant women who ascribe personhood to the embryo navigate infertility, religion, and reproductive technologies that often result in embryo loss? I find that religion and gendered ideals of motherhood, and by extension womanhood, helped women both form attachments to embryos and make sense of embryo loss. For evangelical women infertility and embryo loss were often understood as part of a divine plan to build families that might otherwise not have formed in the configurations they eventually did. Many considered embryo loss to be undesirable but inevitable in their pursuit of motherhood. Women described their intention as the creation—not the destruction—of embryos when using IVF technology, thus embracing rather than rejecting motherhood. These insights into why there is less moral outrage about embryo loss in fertility clinic shed light on larger questions about the 'politics of reproduction' in the United States (Ginsburg and Rapp 1991).

Infertility and Assisted Reproduction in Western and Non-Western Contexts

Medicalization, Gender, and ARTs in Western contexts

Social scientists have studied the experience of infertility and ARTs primarily in two contexts, Western and non-Western. These accounts of infertility and ARTs unintentionally associate secular accounts of scientific technology and infertility with the Western world, and religious experience and infertility with the non-Western world (Franklin 2006). A significant part of the story of infertility in Western contexts is how it underwent medicalization, the process by which a condition of human life becomes defined as a medical problem that necessitates medical intervention (Conrad 1992). Within this framework, alternative explanatory frameworks, such as God and religion, are removed from medical institutions' definitions, explanations, and treatments of medical conditions. However, people draw on cultural frameworks, such as gender and religion, to make sense of infertility, as Greil (2002) observes, “[women experiencing infertility] live in several metaphoric worlds at once; they can call on different vocabularies, sometimes simultaneously, to express the ways infertility has affected them” (106). While religious people's experiences are largely missing from Western accounts of assisted reproduction, gender and its relationship to these technologies has been widely examined (Becker 2000; Bell 2014; Franklin 2002; Greil 1991, 2002; Sandelowski 1993; Thompson 2005).

The influence of the biomedical framework on women's experiences of their bodies and technologies is evident in research on the medicalized experience of infertility treatments in the United States. Greil's (1991) study of women experiencing infertility found that women see their infertility as an “organic” problem needing technical solutions. Women view themselves not only as flawed bodies but as flawed women and look to technological intervention as a both a remedy for a medical condition and to overcome infertility's threat to their gendered sense of self

(Becker 2000; A. L. Greil, Slauson-Blevins, and McQuillan 2010b; Ireland 1993; Ridgeway and Correll 2004). Because reproductive technologies are understood as enabling hope by offering the possibility of a biological child (Franklin 2002; Greil 1991; Sandelowski 1993), they are described as having a “pulling” effect on women that “compels” use, despite their frequency of failure (Becker 2000; Franklin 2002; Greil 1991; Modell 1989; Sandelowski 1993; Thompson 2005). Early feminist accounts of ARTs described these technologies as patriarchal instruments of control over women’s natural reproductive capacities (see (Elizabeth F.S. Roberts 2016). Later accounts challenge such depictions by showing how women strategically navigate the technologies to achieve their desired goals (e.g., Thompson 2005).

Cultural representations of womanhood and motherhood are key cultural schemas by which people make sense of infertility and ARTs and also defining whose reproduction is valued enough to be given access to treatment (Bell 2014:2; Earle and Letherby 2003; Hays 1998; Jain 2006). Cultural schemas (Sewell 1992), which are interpretive frameworks that shape how people experience and act in the world, are useful conceptual tools in understanding how people make sense of infertility and ARTs. Access to ARTs being largely limited to racially and economically privileged women is an example of the stratified system of reproduction (Bell 2014), a concept coined by Shellee Colen (2009) to describe inequalities in reproduction where certain groups’ reproductive capacities are valued and encouraged and others are restricted.

Missing from these accounts of the gendered and medicalized experience of infertility is an analysis of the role of religion. While a few US-based studies have referenced religion when examining the uncertainties of infertility (Sandelowski 1993; Greil 1991), the rare refusal of treatment (Thompson 2005), and the financial inaccessibility of infertility treatment (Bell 2014), religion itself was not the focus of these analyses. Therefore, our understanding of the experience

of infertility and ARTs in the United States is largely limited to a medical model that continues to separate mind from body and the spiritual from the material (Scheper-Hughes and Lock 1987).

Religion & ARTs in non-Western contexts

More recent anthropological studies provided an intervention to a Eurocentric focus on technology, science, and the issue of infertility being limited to wealthy, Western nations and bodies. These cross-cultural accounts, which situate the relationship between religion and science at the forefront of their analyses, show how nature, culture, and technology are constitutive of each other in contingent relationships that emerge within particular political and economic contexts (Bharadwaj 2006a, 2006a; Birenbaum-Carmeli 2004; Handwerker 2002; Inhorn 2003; Inhorn and Birenbaum-Carmeli 2008; Kahn 2000; Paxson 2004; Roberts 2012, 2016). For example, in her work on ARTs in Egypt, Inhorn (2012) contrasts US accounts of assisted reproduction that highlight "a very secular-materialist 'consumer model,' " with Egyptian accounts of ARTS where both secular and religious Egyptians raise concerns about making babies according to religious guidelines (Becker 2000; Inhorn 2012). Bharadwaj's (2006a) study of IVF clinics in India also reveals the intertwining of religious in science. Clinicians and patients in Indian fertility clinics invoke their Hindu faith to explain both IVF's successful outcomes and high rates of treatments failure. These "clinical theodicies" challenge Western conceptions of scientific spaces as strictly secular (451). Likewise, Roberts' work on assisted reproduction in Ecuador (2012), an overwhelmingly Catholic country, shows not only how IVF is accepted by Catholics but also how religion is a form of assistance invoked in the clinics, referred to as "God's laboratories." Taken together, these studies show the various ways that religion and technology are part of the experience of infertility in non-Western contexts.

Accounts of ARTS in the West have been less attuned to the intermingling of religion and science in clinical settings and patients' experiences.

Cultural Meanings of the Embryo

Anthropological studies in cross-cultural contexts also provide a vantage point for understanding the cultural meanings of embryos and what we understand to be the beginnings and ends of life (Kaufman and Morgan 2005). Morgan's (Morgan 2003) historical study of embryos in the United States shows that imaging technology did not immediately lead to the personification of embryos, nor were embryos always embroiled in abortion politics. She argues that rather than embryos having inherent qualities that evoke and provoke questions of "life," social contexts provide "the interpretive lenses through which embryos are imbued with meaning" (Morgan 2005, 262). This is evident in Roberts' (2007, 2012) research in Ecuador that shows that despite the Catholic Church's unequivocal position on the embryo as human life in need of protection, Ecuadorians concerns about the embryo are not always framed in terms of questions of life. She argues that how the embryo is understood varies and largely depends on the labor history of the Ecuadorian region, which ultimately shaped the forms of Catholicism practiced. In some regions, Catholics practice "kin ethics" rather than "life ethics" and would rather discard an embryo than risk "abandoning" one of their own who might end up in a family of a different race or class (Roberts 2011). These studies illustrate how the meanings of embryos vary by context and questions of "life" are not always of concern.

This contingent of definitions of life are also evident in the United States. Lyerly et al. (Lyerly et al. 2006) studied infertility patients' decisions about the disposition of frozen embryos and found that concern for the embryo did not always stem from right-to-life beliefs but

was sometimes a result of anxieties about the embryo being in another woman's body or a part of another family. The latter concern of abandoning an embryo resonates with Roberts' findings. However, embryos in the United States are still defined in terms of an individual's future rather than the future of a collectivity that is responsible for abandoning one of their own (Roberts 2011). These studies suggest that ideas about embryos as sacred or banal entities—if indeed they are recognized as entities at all—are contingent upon the socio-material contexts within which they are embedded and from which they emerge.

Taken together, these various approaches to studying ARTs and infertility show that the gendered and medicalized experience of infertility has been extensively examined in Western contexts. Studies on ARTs in non-Western contexts challenge the Eurocentric focus of earlier works where a secular experience is largely assumed and highlight that meanings attributed to the embryo vary depending on the context. But we still know very little about religious people's experiences with infertility and ARTs in Western contexts like the United States, despite religious institutions having much to say about gender, reproduction, and ARTs. These studies provide a basis for the analysis of gender, ARTs, and religion among one of the largest religious groups in the United States, evangelical Protestants, who both advocate for the protection of the embryo and are consumers of technologies that result in embryos being destroyed.

Methods

Recruitment and Sample

To understand how evangelical Protestant women experience infertility and ARTs, I conducted in-depth, semi-structured interviews with 42 Protestant women who experienced infertility. I recruited participants online via Craigslist, Facebook groups, infertility blogs, and forums.

Recruitment was limited to Christian (non-Catholic) women aged 18–50 who had considered infertility treatments.

While participants responded to recruitment from across the U.S., they were primarily from the Midwest and the South. The median age of participants was 32. Forty one identified as Caucasian and one as African-American. Thirty were employed, eight were stay-at-home parents, one was a student, and four provided no response to their occupational status. The sample is predominantly middle to upper-middle-class, white, college-educated women and comparable to studies about who has access to ARTs in the United States (Bell 2010; Chandra and Stephen 2010; Jain 2006).

Table 2. Protestant Sample Characteristics (n=42)

	<i>Evangelical</i> n=36	<i>Mainline</i> n=3	<i>Other</i> n=3
Education			
<i>Less than 4-year degree</i>	10	1	0
<i>4-year degree</i>	16	0	2
<i>Graduate degree</i>	9	2	1
<i>No Response</i>	1	0	0
Household Income, \$			
<i>20,000-39,999</i>	3	0	0
<i>40,000-74,999</i>	21	1	2
<i>75,000-100,000+</i>	11	2	1
<i>No Response</i>	1	0	0
Church Attendance			
<i>At least once a week</i>	29	1	2
<i>2-3 times a month</i>	3	2	0
<i>Once a month</i>	2	0	1
<i>Less than once a month</i>	1	0	0

<i>No Response</i>	1	0	0
Religiosity¹¹			
<i>Very religious</i>	20	0	1
<i>Religious</i>	12	3	2
<i>Somewhat religious</i>	4	0	0
<i>Not very religious</i>	0	0	0
<i>Not religious</i>	0	0	0
U.S. Region¹²			
<i>Northeast</i>	2	1	0
<i>South</i>	11	0	0
<i>Midwest</i>	22	2	3
<i>West</i>	0	0	0
<i>Other</i>	1	0	0
Marital Status			
<i>Single</i>	0	0	0
<i>Married</i>	35	3	3
<i>Divorced</i>	1	0	0
Infertility			
<i>Primary</i>	34	3	3
<i>Secondary</i>	2	0	0
Use of ARTs, NaPro, Adoption¹³			
<i>Medication (e.g., Clomid)</i>	34	2	3
<i>Intrauterine/Artificial Insemination (IUI)/(AI)</i>	13	1	1
<i>IVF</i>	11	1	1
<i>NaPro</i>	0	0	1
<i>Embryo Adoption¹⁴</i>	7	0	0
<i>Donor Egg</i>	1	0	0
<i>Donor Sperm</i>	0	0	0
<i>Adoption</i>	13	0	3

Median Length of Time Trying to Conceive (years)

¹¹These are responses to a question about one's level of religiosity on the demographic survey. However, due to the various meanings women assigned to the word "religiosity," I rely primarily on women's responses during the interview to a question about the importance of religion and God in their life as a more accurate measure of their religious devotion. See methods section for additional information.

¹²One Protestant respondent was from the United Kingdom, and one Catholic respondent was from Latin America.

¹³Categories are not mutually exclusive.

¹⁴Since the women interviewed primarily use the term "embryo adoption" rather than "embryo donation," I use the former.

Measuring Religiosity and Classifying Religious Identity

Protestantism is complex and difficult to classify in terms of religiosity and religious identity (Laumann 1994). This study incorporates multiple measures of religiosity, including a religiosity scale, an open-ended interview question about the importance of God and religion in their lives, frequency of church attendance, and Bible reading. In the demographic survey, I asked respondents to identify their religiosity on a scale ranging from very religious to not religious and included a space for comment should none of those criteria apply. In this space for comments, I found that women assigned various meanings to the word “religiosity.” For example, some associated “religiosity” with adherence to institutional and doctrinal rituals and rules, which for them was not a measure of devotion to God. The following are a few examples of survey responses to questions of religiosity:

Respondent A: “I believe being "very religious" is different than having "a strong relationship with the Lord." I prefer the latter. I suppose the world would look at this as "very religious," though.”

Respondent B: “Not "religious" in that Christianity is not just a bunch of rules to follow. It's a relationship with Christ.”

Respondent C: “I don't consider myself to be "religious" as I feel that term is completely devoid of the relationship which Christianity revolves around. I do, however, consider myself a devoted Christ follower.”

Given that some women were reluctant to describe the strength of their faith under the label of “religiosity,” I relied primarily on women’s responses during the interview to a question about the importance of religion and God in their life to determine their level of religiosity.

Women often described their relationship with God as the most important aspect of their lives, even before their spouses and children. Using this measure, the vast majority of the sample described their relationship with God as central to their lives.

Religious affiliation was determined using a demographic survey question asking if the respondent identifies as: Catholic, Evangelical, Protestant, Jehovah's Witness, Mormon, Orthodox, or Other, with a space to elaborate. The survey also included a question asking which religious denomination the person most identified with and a space to respond. Because several denominations were provided by the respondents, I grouped respondents into three broader categories: mainline, evangelical, and other Protestant. There is a sociological literature that addresses the challenges of categorizing Protestant denominations (Hackett and Lindsay 2008; Lewis and de Bernardo 2010; Steensland et al. 2000; Woodberry and Smith 1998). Protestant denominations are numerous, and the relationship between religious identity and denomination is complex. Researchers have proposed multiple classification schemes for Protestant religious identities, such as evangelical or mainline, often relying on multiple proxy measures. Of these, the most commonly used measures for distinguishing broader groups of Protestants are self-identification, beliefs, and denominational affiliation (Smith 2000; Steensland et al. 2000). Some researchers differentiate mainline from evangelical Protestants by associating literalist readings of the Bible with evangelicals. The survey I provided to respondents included questions about literalist interpretations of the Bible. However, respondents' views on the Bible turned out to have limited utility as indicators of belonging to an evangelical or mainstream denomination because many self-identified evangelicals had mixed responses about literalist readings of the text.

In order to distinguish between mainline and evangelical Protestants, I relied on the interviewees' individual self-identification¹⁵ as well as Steensland et al.'s (2000) religious classification scheme. Those interviewees whom I categorized as evangelical self-identified as such, or indicated a denominational affiliation associated with evangelical identity according to the classification scheme. I followed Steensland et al.'s approach of classifying those who identified as non-denominational as evangelical if they attended church at least once a month.¹⁶ Steensland et al. argue that the rise of nondenominational affiliation is within evangelical groups and that those who identify as nondenominational and attend church regularly tend to have attitudes similar to those in evangelical denominations (Steensland et al. 2000).

There were a few respondents who could not be categorized according to these measures. I classified one woman who identified as "Protestant-Presbyterian" as evangelical because she described undergoing a "born-again experience." Three women who identified as "Protestant-Lutheran," "Protestant-Methodist," and "Christian-Lutheran" were classified as "Protestant-other." Because there are subdivisions of Methodist and Lutheran denominations that fall into evangelical and mainline traditions, I could not categorize these women as evangelical or mainline with the limited denominational information provided. After applying all of these measures of classification, the sample was composed of thirty-six "evangelical," three "mainline," and three "Protestant-other" women.

Interviews

¹⁵Questions about self-identification and religiosity included a space for open-ended responses should none of the provided categories match the individual's identification.

¹⁶One non-denominational woman, whom I classified as evangelical, attended mass less than once a month. However, she noted that she would like to attend mass more often, but could only attend less than once a month due to caring for her young children.

I conducted all of the interviews by telephone. I asked participants about their backgrounds and the importance of religion in their lives, their relationship with God, their experience with infertility, marriage, treatments, and their thoughts on ARTs. At the end of the interviews, I asked participants to complete a short demographic questionnaire.

All interviews were transcribed verbatim. I read through all of the transcripts and identified major themes such as: personal relationships with God, God's plan, God's role in technology, attachment to and loss of embryos, and intent. I used Dedoose qualitative software to create codes with these themes. I used both open and focused coding to develop and refine my thematic categories (Emerson, Fretz, and Shaw 2011). The coding process was thus iterative, as I used the data to develop initial ideas and then revisited the data throughout the analysis. This iterative process developed through writing initial descriptive memos reflecting on the data. I then developed these memos into analytical memos. Finally, I integrated theoretical literature to connect and extend the analysis and findings to broader theoretical conversations.

At the end of the interviews some asked if I experienced infertility and why I'm studying this topic. I responded that I have not tried to have children, and that the study is intended to help us understand religious people's experiences with ARTs. During the interviews, I was struck by how many of the women voiced their opposition to abortion and ascribed personhood to the embryo while at the same time accepting embryo loss under certain circumstances when using ARTs. From my perspective as an outsider to their religious and political worldviews, these were perplexing tensions, not because I expect people's beliefs about complex issues to be consistent—they rarely are—but because in their narratives their commitment to the protection of the embryo was particularly salient under certain circumstances, such as abortion and stem-

cell research, but not others. During the interview process, I asked follow-up questions to better understand how women approached these issues.

In his research on poverty-stricken African American men's views of the social world, Young (Young Jr. 2004) notes that seeming inconsistencies and contradictions in people's narrative should be viewed as, "clues that help us to form a more accurate picture of people's thoughts on particular issues...the analyst is charged with figuring out in which ways these inconsistencies allow the individual to maintain his general worldview on a topic" (140). It was through following up on these moments of the interview that were confusing to an outsider like myself that I was provided with some of the most important insights about the circumstances under which the embryo is imbued with moral significance, and how gendered ideals were central to the women's reasoning. Once we had established a rapport in the interview, I asked probing questions such as: "Some argue that using IVF is akin to abortion because embryos are harmed or destroyed. What are your thoughts on that?" A typical answer would be along the lines of, "It's completely different." I would then ask, "Can you help me better understand how it's different?" or "Can you help me better understand your belief in the embryo as a person and not seeing the loss of embryos during IVF as problematic?" For some, this questioning would bring to the fore tensions they had apparently not considered, and they would sometimes reply, "I guess I never really thought of that." For a smaller group, these tensions were evident without my prompting, and a visit to fertility message boards reveals that many women struggle with them. How the women in this study navigate these tensions—or explain why embryo loss from ARTs does not contradict their religious beliefs—became the center of my analysis. I was not only interested in the women's views on complex issues, but how they reasoned through their beliefs and experiences, what seemed most important to them, and why.

My objective here is not to single these women out as having inconsistencies in their narratives. We are all entangled in our own contradictions between beliefs, values, and practices that we make sense of in our everyday lives. It is the task of a qualitative researcher to focus on how people navigate these entanglements in order to better understand their moral worlds. I show why many did *not* regard their views on the embryo as inconsistent. Importantly, for many the inconsistencies in their narratives were a result of tensions at the level of gendered ideals. For instance, how does one sustain one's profound desire for motherhood through the pursuit of technologies that often result in embryo loss, while striving to be a good, Christian woman who ascribes personhood to the embryo and advocates against its destruction in other settings? The process of attempting to fulfill the obligations of "good" motherhood, and by extension womanhood, can at times place one at odds with those very ideals.

Findings

"The Bible really doesn't cover that": Seeking God's Guidance

Unlike religious traditions, such as Catholicism, that have clear positions on the use of ARTs, many Protestant denominations do not. Though a few women discussed reproductive technologies with their local pastors, what mattered most to the women in this study in their approach to life and their decisions about infertility treatments was not institutional rules but their personal relationships with God. As one woman explained:

My relationship with God is a personal thing, more than just a religion that's a set of rules....I know that it is a real relationship, and I trust my knowledge of what the Bible says is true even when I don't feel it. I can't imagine not being a Christian. It definitely colors—it is my worldview.

The women's accounts invoked the primacy of the Bible and their individual relationships with God in making sense of their lives and the world they inhabit. Often, their

relationship with God was also their main source of comfort and support when dealing with infertility. Women experiencing infertility undergo significant distress, which is intensified in women undergoing treatments (Greil 1997; McQuillan et al. 2003). For example, Sarah, a homemaker from the Midwest who underwent IVF and experienced multiple miscarriages, described the significance of God's support:

I feel if I wouldn't have him, I would probably be on depression medicine and I wouldn't be myself at all, because I wouldn't be able to deal with all the hurt and everything from IVF, and miscarriages, and what people have said.

Natasha, an African American woman from the South, explained that infertility is even more stigmatized in the African American community, where she has never heard it discussed. She described God as her greatest source of support:

One of the hardest things I've ever gone through in my life was that year of infertility struggles and treatment. It's like a silent problem. You can't talk about it. And so I learned how to cope without having support of friends and family. I was going to lash out at everybody, or I had to just learn to turn to God.

Women described God as not only a companion and a source of comfort in trying times, but also as providing guidance and direction in navigating decisions around infertility treatments. Many described communicating with God through the Bible. Others described more mundane modes of interacting with God. For example, Darlene, a therapist from the rural Midwest who underwent several unsuccessful intrauterine inseminations (IUIs) as a result of male-factor infertility, described how God provided guidance during her household chores:

The way I talk to God is I talk to him if I'm just unloading the dishwasher or folding the laundry. I'll just sit there and just talk to him and I just, I know he hears me... I always ask for guidance on how to help hear him, and that's [laughs] one thing I'm not very good at. But his way of talking to me is he shows me, and so that's one thing I always say. Okay, just help me open my eyes and see what you're going to tell me, and so I talk to him like I talk to a friend, you might say. I just start talking [laughs]. No rhyme or reason to it.

The few respondents who looked to their local pastors for guidance about using reproductive technologies were typically told to look to God for direction. As one respondent recounted, “He told me, ‘whatever God wants you to do—you’ll feel compelled to do. God decides what will happen.’” Yet one cannot look to the Bible for explicit guidance regarding recent technologies, as one woman explained: “I mean, it’s talking about things that happened two thousand years ago when you didn’t have this kind of technology.”

Given the importance of their personal relationships with God, many searched in their everyday lives for signs from God about how and whether to proceed with treatments and adoption. Rachel, a woman from the South suffering from secondary infertility¹⁷, described feeling called to be a mother. She was reluctant to pursue fertility treatments due to cost and the likely negative effects of medications on her emotional well-being, but found her answer from God in the form of an unexpected car payment:

I pray like all the time, probably more than some other people...Prayers are answered in the craziest of ways. When I started exploring fertility medications, I found out from my gynecologist that it would cost one hundred dollars per month, and we would do three months of medication. Well, I just happened to get a letter in the mail saying, we’re taking care of your car payment this month, and my car note is three hundred dollars a month. So when I’m praying for some sort of answer, and then I get that kind of letter in the mail, that’s an answered prayer. It’s like, God didn’t show up in my living room, sit down next to me and say, so I’m going to cover the expense. It was an answered prayer in a different way.

Claire, a woman residing in the Midwest who works as a lab technician, also found signs from God that she should pursue IVF, which was cost prohibitive until a job change resulted in insurance coverage for three cycles of IVF:

The Lord’s hand is at work in different things, and we felt very adamant that the Lord was telling us to try IVF. I think it was because I never felt like the door was

¹⁷ Secondary infertility refers to infertility experienced following the successful pregnancy of at least one biological child, whom was conceived without the assistance of reproductive technologies.

closed after the two IUIs¹⁸, I never felt like the door was closed. And then when I found out the [new] insurance covered IVF, I thought oh, this is why it wasn't closed. I really think that it was the Lord saying, "You're going to try the best thing out there and it's not going to work, so that means the door's going to close." At the beginning, I thought oh, the door's open because we're going to have a baby. Well, apparently I needed more closure [laughs]

Claire explained that divine intervention allowed her to afford IVF in order to achieve closure and stop pursuing treatments and biological parenthood. Despite her husband's opposition to a third cycle of IVF because of the emotional toll the previous cycles had taken on them, divine intervention was necessary to end her pursuit for a biological child. This supports prior research showing how difficult it is for women with access to these technologies to stop using them (Becker 2000; Greil 1991; Sandelowski 1993; Thompson 2005). Although a third cycle of IVF would have been covered by her insurance, the costly medications were not. She and her husband decided that if they could raise the thousands of dollars for the medication, that would be a sign from God to pursue the last round of treatments. When they fell slightly short of their goal, they decided not to pursue a third round of IVF. She credits God with slowly taking her desire for treatments away, though she has been unable to part with one of the costliest medications, which she stores in her refrigerator.

Through interpretations of God's messages to them, the women found a trusted guide to assist them in navigating treatments and in deciding whether or not to pursue them.

Infertility as God's Plan

The women's trust in God extended to the explanatory models and meanings they attributed to their infertility, which extended beyond a medical model. Infertility was understood as part of

¹⁸ Intrauterine inseminations (IUIs) are fertility treatments where sperm (from male partner or donor) is transferred to a woman's uterus to assist in achieving pregnancy.

God's plan for their lives and as a means to the family formation he intended for them. Elaine, a woman from the South who chose not to use ARTs and who eventually adopted, explained:

What have I done wrong in my life that God's withholding a child from me" is a very human question to ask ourselves. But through reading the Bible, I don't know that God uses a human soul as a little sticker on a cosmic reward chart. Like you've been bad so you're not going to get a kid....I noticed that in the Bible God opened up the women [experiencing infertility]. He gave children to these women who were kind of just unfortunate characters in a story, and I was able to view God [eventually] giving these women children as a really gracious act.

Elaine was not alone in constructing a theodicy that rejected punishment as an explanation for infertility. Paula, an evangelical from the Midwest who works as a counselor, was in her twenties when she had an abortion that she deeply regretted. She later tried to conceive for close to ten years and experienced multiple miscarriages, which she initially interpreted as punishment for the abortion:

So I went through a period where...my faith was weak, and then I thought, Is this you punishing me, Lord? Is this you trying to show me, you know, I did something wrong, and you're going to show me, you know, how wrong it was? But I have to say it really was a miraculous growing period, because we went from like not being able to have any children to getting injections, and I would...get pregnant, and then make it about nine, ten weeks and then miscarry, and I lost six babies. And at that point, I was broken. I mean, I was just broken, where there was nowhere else to turn...and I finally said to the Lord, Okay, I'm broken. I'm done. I've tried it my way, and I'm ready for you to bring whatever you think needs to happen into my life. I'm ready. I submit.

Paula described this period as one of personal and spiritual growth during which she came to understand her misfortune as part of a larger path for her life. She eventually pursued adoption and came to understand her struggle with infertility and multiple miscarriages as God preparing her rather than punishing her. The name she had chosen for the child that she lost to a miscarriage was the same name that her adopted daughter had been given at the orphanage;

Paula interpreted this as confirming the connection between her struggles with infertility and her decision to adopt.

While many of the women invoked a divine plan in explaining their infertility, their theodicies of infertility preserved their understanding of God as a benevolent guardian who would not intentionally harm or punish them. They explained that God orchestrates the unfortunate aspects of their earthly lives into a larger plan that includes a deepening of one's spiritual relationship with God, thereby transforming the women to become better people through overcoming the misfortunes of earthly existence.

Whitney, a homemaker from the Southeast, tried to conceive for over a decade. During Whitney's pursuit of treatments, her husband, a pastor, had concerns about her intense focus on achieving motherhood. Whitney described God as the architect of her early life who designed all the details in order for her to be "more like Christ." She eventually adopted an orphan from China and explains that her infertility was what partly led her to adopt a child in need:

[Infertility] is a trial designed by him to test me and refine me, and make me more like Christ, like what the Bible says, everything that happens to us, the purpose of it is to make us like Christ. I think that this trial was specially hand designed for me....I have learned God's sovereignty in how he orchestrates all the events in our lives for our good and for his glory. [During the adoption process] I believe that the Lord parted the waters for us at every moment. There were many times where we kind of were standing looking up at the figurative hill we didn't think we could climb, and somehow it's easy, and we were at the top....Maybe that was a gift [from God] because we couldn't bear children easily....Somehow the money was there [through savings, generous gifts, zero interest loans, tax credits] when we needed it, and somehow the paperwork was finished when we needed it to be.

She described how through her suffering with infertility and devotion to God after repenting for the "idolatry" of motherhood, God provided a gift akin to the miraculous parting of the Red Sea for Moses. Whitney interpreted her suffering and devotion to God as signs that she has been chosen to receive miraculous blessings from God. This is similar to Elaine's

observation, above, that biblical women who suffered infertility and other misfortunes in their lives were eventually graced by God with children.

Maria, an upper-middle-class manager from Texas, described God, whom she communicates with using a Bible app on her phone, as the center of her life. She has been struggling with infertility for six years and has undergone IUIs, IVF, and embryo and traditional adoption. She said that God's plan for her started when she was a child. She would imagine the dolls she played with as orphans, and she enacted adoption "home studies" to find suitable homes for them. Later in life, she suffered from recurrent miscarriages and found out that her egg quality was poor. She heard about embryo adoption while listening to the conservative Christian radio show "Focus on the Family" and became an advocate for the cause because "these little embryos needed to be born." God's plan for her also included Laura, her child through traditional adoption. Maria described that although that child was not genetically related to her or her husband, God knew Maria and her husband would be Laura's parents:

I really believe with all my heart that when Laura was being knit together in Catherine's [the biological mother's] womb, God knew who her mom was going to be, and he knew who she was being made for. And so if he's creating Laura, why couldn't he create her with my likes, my hair color, my eye color, why couldn't he do that? He's God. He gets to pick. And so our birth mother has brown hair and brown eyes and I have blonde hair and blue eyes, and Laura was born with blonde hair and blue eyes. She looks just like me. She looks nothing like her birth mother, acts just like us, has character traits of both my husband and myself, and I think that God is the universe that creates us all. He's bigger than the details on a birth certificate. He can do what he wants, and so when I see something in Laura that is me or my husband, I absolutely believe God put that in her heart because he knew who her parents were going to be. So to me, the biological connection is there. You know, I really don't think it would be any different if we had a technically biological child, and I believe God doesn't make mistakes, and he is the author of life.

The importance of the cultural ideology of biological parenthood is evident in the way Maria described God's intervention by drawing on biological frameworks of kinship. For Maria,

God not only created life, he also intervened in a way that challenges scientific understandings of genetics and heredity. Divine intervention in this case is understood as facilitating ties of biological kinship between adoptive parents and children. Laura's personality and physical appearance provided evidence to Maria of God's intervention in building their family despite the obstacles of infertility.

Others understood their infertility as God protecting them from additional hardship by delaying the time a child would come into their lives. Understanding infertility as part of God's plan also likely alleviates the threats to these women's gender identity that are so common in accounts of infertility. As one woman explained, rather than questioning her womanhood or why she was afflicted with infertility, she does not view infertility as an indication of something being wrong with her:

I know that this [infertility] was meant to be, and I'm not constantly questioning the doctor. I'm not questioning science. I just know this has nothing to do with science, and I know there's really not anything wrong with me. This is what his plan was, so I'm not going to argue.

These excerpts illustrate how medical and religious frameworks are intertwined in these women's experiences of infertility. For them, infertility is not necessarily an obstacle to building their families; it can also be understood as facilitating the formation of familial ties among God, people, countries, homes, wombs, and embryos, which would otherwise not meet in becoming families. God is understood as a benevolent father figure and personal guardian who orchestrates these women's lives. Infertility is thus part of a divine plan in forming the families that God intended, but not the families that the women dreamed of before facing infertility.

“God gives it the spark of life”: God's Relationship with Reproductive Technologies

God's role was also evident in the women's accounts of reproductive technologies and their outcomes. In women's accounts, science and religion work together and are thus compatible.

Many described God as providing scientists with the ability to create reproductive technologies and ultimately determining whether a life resulted from them.

But religion and God alone are not sufficient in the orchestration of God's plans. Rachel explains that she regretted solely relying on talking to God to provide her with a child early on in her struggle with secondary infertility:

In the beginning, I put too much faith in God himself taking care of this and not into the ability that he gave medical professionals. We talk about it at church frequently. God gave heart surgeons the ability to perform open-heart surgery....So God has given my doctor the ability and the brain to help me get over this hurdle and help me. In the beginning, I should have been a little more proactive with getting with my medical staff about getting pregnant than just saying, "Hey God, you know what? I want to be pregnant." You know, when God opens doors, he opens them wide open. He doesn't just crack them, and I think sometimes we're a little too hesitant to go through them because we're scared.

An additional explanation for Rachel's delay in seeking medical assistance is that she was suffering from secondary infertility, which may have delayed the realization that she was having fertility issues and lessened the cultural pressures to achieve motherhood because she had a successful pregnancy before. But Rachel's realization that she should have been more proactive highlights that for these women, realizing God's will or plan involves more than prayer or talking with God. According to many of them, God endows people like doctors with abilities that need to be exercised in order to bring God's plans to fruition.

Natasha, who was pregnant during the interview as a result of IVF, was also initially reluctant to undergo IVF, despite being able to afford it. Her concern was whether using the technologies would intervene with God's plan. She came to realize that having financial access to ARTs might actually be part of his plan:

I felt that if God really wanted us to have a family, then this would happen, and maybe we wouldn't have to do IVF, and [my cousin] said something that really

sprung through to me—and I believe, too—is that sometimes you need help, and maybe God has made this available to me, and affordable to us, and put us in a place, in a position where we could partake in this. It’s still a blessing from God, and so I don’t believe that it’s playing God at all....I know too many women who have had IVF after IVF after IVF, and still have not been able to get pregnant, and so I just don’t believe that.

Natasha’s experience illustrates Roberts’ (2013) point that in countries like the United States, where autonomy and individualism are valorized and people, particularly those with access to ARTs, live under less precarious conditions, the interdependencies in the ways our lives materialize become difficult to recognize. Natasha assumes that she and her husband should be all that is needed to make a family. In contrast, in places with more precarious life conditions, dependence on assistance from others is recognized because living would not be possible without it (2013).

Joan, a Midwestern woman who experienced a stillbirth after an IUI, also explained how the outcomes of the reproductive technologies were ultimately up to God. In doing so, she also challenged arguments that using these technologies are “playing God”:

The things that we can do and that we’ve discovered that can help to create life—to create other wonderful people—is great. And we can still try all we can, but there’s still something miraculous in how conception and implanting actually happens. And I think that God still plays that role in life even if science has something to do with it.

Maria echoed Joan’s understanding of God’s role in the outcomes of reproductive technologies, for which scientists coordinate the technology, patients undergo the treatments, and God provides the “spark of life”:

At the end of the day, you can put the sperm and the eggs in the Petri dish and nothing will happen unless God gives it the spark of life. And so you’re not manipulating God. You can’t manipulate God. We prayed about it a lot before we did it, and we asked God to do his perfect will, which at the end of the day meant it didn’t work.

Like the women above, many of the women I spoke with expressed the belief that while humans have agency in developing and using these technologies, there is something beyond human control—something sacred and miraculous—that occurs at the moment of conception and during implantation of the embryo. For them, science, man, and God work together in the creation of life, as Lisa described in her account of her treatment:

I don't know if I honestly feel like God communicates back to me other than... when I prayed to have my son, and I had my son. At our final round of IVF, I had prayed before, but I hadn't asked God to really be there with me. But then I asked God to hold my hand while they were implanting the embryos and then it worked, so I feel like he answered me that way. I just kind of felt like he was there. They [doctors] looked at the best ones [embryos], and in my mind, God gave them the right ones to use, and God decided whether it took or not. In my mind, God gave man the knowledge of how to do that, and he decides which embryos were going to thrive and which weren't, so in my mind, this whole process was very much God working together with man. It was God guiding man's hand.

When I asked these women follow-up questions about the extent of God's intervention under circumstances of technology use that they found more troubling—such as sex selection or genetic testing for certain diseases—they explained that the authority of God's will in creating and ending life does not mean that humans have no agency:

There's God's perfect will, and then there's his permissive will. In his perfect will, we open our hands and we let God just take control and we see where he takes us, and then there's his permissive will—there's what he'll let us do.... So in God's permissive will, you want a boy, he'll let you have a boy. But what you may be missing out on is a really wonderful little girl that he had planned for you, and you missed out on that in his perfect will, because you didn't trust him with that. You tried to control the situation, and so—But at the end of the day, if God doesn't want you to have a kid, you're not going to have a kid. You can have a hundred little girl embryos, put them all in, and it'll never work.

A minority of women in this study had stronger reservations about using ARTs. Jill, a Southern woman with a master's degree, tried to conceive for five years with her ex-husband, who suffered from male-factor infertility. She eventually adopted a child from Asia. The

couple's only treatment option was IVF with intracytoplasmic sperm injection (ICSI), a procedure in which a fine needle is used to insert a single sperm into the egg.¹⁹ The couple was unwilling to use a sperm donor because they, like many women the study, found it akin to adultery. Jill found IVF without ICSI unproblematic, but manually inserting the sperm was too much technological intervention for her:

My husband wanted to try [IVF with ICSI], and I didn't—I just felt like that's kind of my religious views come into play. I just felt that the whole ICSI part where you're injecting immature sperm into the egg, to me it was—we were playing God, you know? If it was meant to be, it was meant to be, and I just felt like I just couldn't do it just based on my faith... I could do the IVF but I just couldn't do the ICSI part, so I made the decision that I couldn't go forward with it.

Jill and her husband eventually divorced; their infertility and her strong desire for a biological child were factors in their marriage ending. Her continued, profound desire to experience pregnancy highlights how strongly she opposed using ICSI for fear of “playing God.” According to Jill's understanding of the relationship between God and technology, those techniques of conception in which technology impinged on God's role in forming families in a “natural” way were off limits to doctors in the IVF process. In this way, Jill defined “natural” as leaving conception to divine intention rather than to scientific intervention. Women (n=6) who were Protestant but raised Catholic, as Jill was, were more likely than other women in the sample to voice concerns about the technology that echoed Church teachings on the artificiality of reproductive technologies (Ratzinger, Joseph 1987).

For most women in this study, these technologies and their practitioners were understood to be instruments of God, but there were limits to their embrace of these technologies. Some Protestant denominations have clear prohibitions against the use of sperm and egg donors, and

¹⁹In IVF without ISCI, the sperm and egg are placed in a Petri dish, and the sperm enters the egg without manual assistance.

many women stated that using a donor gamete was akin to adultery, as Maria explained:

If another woman gave her egg and my husband's sperm, essentially, he created a baby with another woman, and so it's participating in the creation of a life that is including a person outside of our marriage. To me, that was just a little bit too close to the story of like Abraham, Isaac, and Hagar in the Old Testament. I don't know that I would even go as far as to say that someone else shouldn't do that.

When I asked how her husband felt about a sperm donor, Maria went to the other room to ask him. He responded that he was opposed to it "because it's another dude...and is it biblical?"

Maria and her husband adopted donor embryos. When I asked if they had similar concerns using donor embryos, she explained that adultery was not an issue under those circumstances: "Would I adopt an embryo that was created from donors? Yes. I did not actively participate in the creation of that life. That life already exists."

While some women voiced concerns about "playing God" using these technologies, most women viewed them as instruments of God's divine plan, which could not be "manipulated" by human intervention. Attributing the loss or creation of life to God may also alleviate women of the burden of self-blame when they use technologies that result in embryo loss.

Making and Losing Embryos: Attachment, Kinship, and Loss

While God's plan and authority over the outcomes of ARTs were salient in the women's narratives, technological outcomes did not always fit neatly into a narrative of God's divine will. The same technologies that are used to create families often also result in embryo loss in the pursuit of family building. The majority of the women in this study described the embryo as sacred, not only because it was a person from the moment of conception but also because it was their child. In their pursuit of biological parenthood, women invoked cultural ideals of femininity—motherhood, nurturance, protection, and altruism—not only in forming attachments to embryos, but also in reasoning through embryo loss. Drawing on these gendered cultural

ideals both enabled the attachments and kin relations that the women longed for and helped resolve tensions between gendered ideals and technological outcomes when the two were seemingly in conflict. In enacting valued forms of femininity and motherhood, women demonstrated their understanding of what constitutes a good woman, a good mother, and a good Christian.

Kinship and Attachment

Women's desire for motherhood is about more than becoming a mother; it is also about becoming a *good* mother (Bell 2014). Women I spoke with often drew on ideals of good motherhood, such as nurturance and protection, in describing their relationship to embryos. As women discussed their deep desire to become mothers and their emotional attachments to embryos, which they considered to be people and which they often considered to be their children, they enacted cultural understandings of good motherhood and womanhood.

Cultural definitions of good motherhood describe mothers who are emotionally attached to their children and invested in their children's well-being (Earle and Letherby 2003; Hanigsberg and Ruddick 1999). Women described that upon seeing a positive pregnancy test, they felt an immediate emotional attachment to what they considered to be their child. Sarah, a Midwestern homemaker who experienced male- and female-factor infertility and who underwent IVF, described how she and her husband had different emotional attachments and experiences of miscarriages:

[My husband] just seems like, well, they were never born, so why don't you just forget about it? It's probably easier for a guy to say that, because they didn't actually carry them, but as soon as I would get a positive pregnancy test or [the clinic] would call me to tell me I was pregnant, like I just had that immediate attachment to that baby as soon as they told me.

Rachel, who experienced secondary infertility but did not pursue IVF, explained the difference, upon learning about a positive pregnancy, between an abstract, philosophical understanding of when life begins and her own definition, which hinges on her emotional attachments to her children and her maternal identity. When asked how she thinks about embryos and whether she considers embryos to be living humans or persons, she explained:

I know that technically, speaking from a philosophy professor's standpoint, they're not considered a life until they're past the point of viability, which is why abortion laws are as they are, but I would still like to think that before the age of viability, a baby is a baby is a baby, because I got attached to my kids, and attached to the idea that I was a mother...as soon as I saw the two lines on the pregnancy test.

While almost all of the women in the study defined embryos as persons from the moment of conception, the location of the embryo—whether inside the body or in the laboratory—affected the qualities of their attachments to the embryos (Roberts 2012), which included their profound longing for a child and the emotional toll of experiencing multiple losses. Natasha, who experienced a miscarriage from an IUI, underwent IVF, and had leftover embryos frozen, described the different experiences of attachment with those embryos that were frozen:

I do think of [the frozen embryos] as my children when I talk about them. I say we have five kids on ice, but I don't feel the same affection for them as I do for the one that's growing in my stomach right now. But I do think of them as our children...I believe they're lifeI don't know how to really explain that...but they're important to me....But say something happened to them in the lab. I don't think I'd be as devastated. Even though I feel like those are my kids, I don't feel an attachment to them. I'm not calling up the clinic to see how they're doing. I just don't—I don't feel an attachment like they're life. It's weird.

Natasha defined embryos as humans—her children—from the point of conception, but she struggled to explain why she felt less attachment to her frozen embryos than to the one growing inside of her. Attachments to embryonic children are contingent. She described this lack of attachment as “weird,” which underscores the cultural expectation that women should feel an

instinctive attachment to their children. Additionally, the emotional and physical experience of a desired pregnancy may affect why she felt less attachment to her frozen embryos. One might argue that the stronger emotional attachment she felt for her child in her womb was an enactment of cultural expectations for pregnant women, who are expected to feel a deep connection to the embryo or the fetus within them. But for someone experiencing infertility and miscarriages, the hope and desire for a biological child likely also plays a significant role in the qualitatively different attachments to different entities that are considered to be (potential) children. This echoes the accounts, described above, in which discovering the news of pregnancy can facilitate immediate emotional attachments.

Desire for pregnancy—particularly when pregnancy is difficult to achieve—can shape attachments to embryos and fetuses. Judy, a teacher from the Northeast who has been struggling with infertility for a year, converted from Catholicism to a Protestant church partly because of Catholicism's strict position on ARTs. She underwent IUIs, surgeries, and IVF, which she said she would continue for as long as she could afford it. Her desire for a child is evident in her description of experiencing egg extraction during IVF:

I used to actually really be afraid of being pregnant...But then the more it seemed it might not be possible, the more I started to realize that I will be absolutely heartbroken and devastated if I don't get to experience being pregnant. I want my body to do what it's designed to do. It was created like—I'm a woman to have children, and to go through that whole process...We just went through our first IVF cycle, and it was very strange, like when they took the eggs out and knowing that they were out of my body—they were like, away. Like they're miles and miles away. But, I felt like—almost like separation anxiety, and it didn't feel right, you know? I wanted them back. I missed them a lot [laughs].

Judy referenced a sense of attachment to her eggs. The eggs leave her body through a highly technical process that involves hormonal medications to facilitate ovarian stimulation in

order to increase the number of eggs, which are then extracted with a surgical needle in the clinic and combined with sperm to become embryos in the lab. During this technical process, Judy described a highly emotional experience of attachment and longing for her extracted eggs. Her missing them and her desire to have them back are akin to a maternal bond between parent and child. This could be because she imagined these embryonic “children” forming at a clinical laboratory, a site removed and distinct from her own body. Judy formed an emotional bond with her eggs (future embryos) and enacted an ideal of motherhood—a caring, nurturing mother concerned for her vulnerable children. The longing could also be experienced as a loss of a part of herself. She believes that as a woman, her body is designed to create children; thus, removing from her body a key part of that process could produce a sense of loss.

Women who adopted embryos also invoked ideals of femininity, such as nurturance and self-sacrifice, in forming attachments to their adopted embryos. Embryo adoption is a process in which leftover embryos are donated for implantation into another woman’s body. To emphasize the embryo’s personhood status, Christian organizations often refer to this process as “adoption”²⁰ rather than “donation.” Women in this study often framed embryo adoption as rescuing the vulnerable, as Maria described in understanding her role in embryo adoption as her divine purpose: “I feel like God’s really called me to advocate for the least, the lost in the embryo world. I think it was his plan and his purpose for me.” She went on to explain that not only is she a vocal advocate for the cause but also that her body is a site of rescue for the adopted embryo, which also allows her to fulfill her desires to experience pregnancy:

I’m very compelled by need. Where is the greatest need? With traditional adoption there’s a line a mile long for every baby....The opposite is true with embryo adoption. You have five hundred thousand embryos right now that are in

²⁰ I use the term “adoption” because it was the language used by the respondents.

storage available for adoption, waiting on families that are willing to carry them, which makes it, first of all, a much easier process. Secondly, much faster, but third, those little babies don't get the chance to live unless someone can carry them. I can carry them. So we were compelled by the need of embryo adoption, and that's why we chose to do it again. Now there are some women who can't carry, who don't have a uterus, or don't have, you know, a hospitable²¹ [laughs] environment, and so, you know, they don't have a choice, but I have a choice, and so—and I would encourage women....And plus, I'm glad I got the experience of pregnancy. I always felt left out of conversations. I had nothing to offer when women started talking about it, and now I do, and I feel like I'm kind of in that club, so very pro-embryo adoption.

Katie, a nurse from the Midwest who described her relationship with God as the most important relationship in her life, heard about embryo adoption on a Christian radio show where they interviewed the first “snowflake baby,” a term used by Christian organizations to underscore their claims about the individual uniqueness of all frozen embryos, among which, like snowflakes, no two are alike:

It still took us a couple of months to know this [embryo adoption] is the direction God wants us to go. When I heard that radio program, I was so in awe and struck by the fact that we...had frozen kids and they had no chance at life. I think traditional adoption is awesome—there are thousands and thousands of kids that need to be adopted. But what struck me was that there were thousands and thousands of kids who never had a chance to take a breath because they're frozen and they have no voice, and they can't even cry about it! At least when you're in the foster system you can cry about it. There's nothing wrong with traditional adoption. But for us, we just wanted to give life a chance. Even if...we don't know if [the embryos] will take, maybe my body will just reject them. Maybe I'm just a place for these children to go on, to be with the Lord. We thought about that too, but if that's what the Lord wants, then it's okay.

Katie was motivated to adopt embryos because she wanted to rescue what she considered to be vulnerable children in need. In contrast to her views of a cryopreservation tank as a place

that suspends life, Katie's body becomes a site of nurturance for facilitating earthly existence or a passage to God in heaven.

While several people in the study adopted embryos, few were willing to donate theirs to other couples. Women were especially opposed to donating embryos for research, as Katie explained:

[Embryo research] appalls me [sighs]. It appalls me, it makes me want to cry to think that—I mean my son started out [as a frozen embryo], and when you look at him and you think that someone would want to do research on his tiny little cells [sighs]. It makes me mad on his behalf and for all of the children they do this on. It also makes me sad that our generation is so depraved that they don't consider the moral implications of what they're doing. I know that some people don't have that love for the Lord, and they don't understand right and wrong in that way—that they're doing something awful.

Katie's emotional attachment to her son and the frozen embryos that she views as children in storage elicited a strong emotional response to the thought of research on embryos. But she also noted a broader dissatisfaction with a society that she understands as not protecting the sanctity of the embryo (Ginsburg 1998). Prior research on decisions about embryo disposition found that nonreligious couples with frozen embryos are more reluctant to donate embryos if they are parents to a child from IVF, which illustrates the moral dilemmas that result from attachments to embryos, for the religious and secular alike (Nachtigall et al. 2005).

Although most women in this study were vehemently opposed to donating embryos for research or discarding them, some invoked the language of altruism and sacrifice in support of donating embryos to research. Those willing to donate often had not done IVF or did not have extra embryos. Diane, who could not afford IVF, explained:

I never really thought about that [options for embryo disposition] as much. I would say that I wouldn't want them thrown away. I probably would say the research is okay, though, if there's no use of them, and they could do some

research to be able to help someone like me. You know, come up with a new technology, I think that that would be a pretty decent sacrifice for them, even though it contradicts a little bit of how I think, but [laughs]—I don't know.

Diane considers embryos to be people, and she is opposed to discarding embryos and to abortion. She noted a tension between these beliefs and her willingness to donate extra embryos to research. But her justification for research is located in the language of sacrifice for the greater good in order to help others like her have families. Others who were willing to donate embryos to other families also invoked the altruistic language of helping other couples who were suffering from infertility to build their families.

But most women were opposed to donating their embryos. Their opposition came from not wanting their DNA “out there” and from their feelings of attachment to and responsibility for embryos that they considered to be their kin. As one woman said, “There’s going to be this person out there...that’s your child biologically, genetically. And it’s with somebody else. That probably would be my struggle. Like wow, somebody else kind of has my kid.” A woman from the Midwest who had undergone four cycles of IVF expressed a similar feeling of parental responsibility toward embryos:

If we’re lucky enough to get twelve eggs²² and we have to freeze eight of them, we’ll go back and try and have eight more kids. I don’t think I could donate them.... I don’t know, honestly. I don’t know if I could handle knowing there may be one of my kids out there not belonging to me....That’s really hard for me, so that’s why we kind of were like, we’re going to use all of them.

For others, struggles with embryo loss during the IVF process deepened the emotional attachments to the remaining embryos. Barbara, a health provider from the Midwest who experienced a miscarriage after IVF, explained:

²² The terms “eggs” and “embryos” were often used interchangeably.

[Embryo donation to other families] doesn't sit well with me. I don't think I could do that. I don't think I could donate my extra ones, because I had—Let's see, what'd I have? Six fertilized eggs the first round and seven the second, so it's almost like I feel like I have thirteen kids. I have all the [embryo] pictures still, because they give you pictures during the process, and I still have them all. Because I never made it to the ultrasound with my miscarriage, I don't know if the two that we implanted would have been two babies or not, but like I—I still picture them—I grieve them, I should say ...I'm upset about having thirteen fertilized eggs that I never—those babies I'll never get to meet. I don't think I could give one away. I don't think I could do it. There's no way I could do it. I know I couldn't do it.

Barbara's longing for a biological child and her experience of a miscarriage and loss deepened her attachments to the embryos that she considers to be her kids, which made donating them to another family impossible for her.

Roberts' (Roberts 2007) study of IVF among Catholics in Ecuador found that in comparison to the United States, where "life ethics" around the sanctity of the embryo dominate, in some regions of Ecuador, the framework of "kin ethics" was more salient than "life ethics." Embryo disposal was thus preferable to donation, which people understood as abandoning their kin (2007). In this study, we see both kin ethics and life ethics at play in people's reasoning around embryo donation. But in the context of this study, particularly for women who had undergone IVF, donation to a family or freezing indefinitely were seen as preferable to donating for research or discarding the embryos, even if such options were morally troubling.

These excerpts illustrate how emotional attachments facilitate kinship relations between women and embryos. Women expressed their attachments to embryos in the language of care, protection, ownership, sacrifice, altruism, and nurturance. In doing so, they invoked cultural values of what constitutes "good" motherhood in enacting maternal relationships with embryos and in fulfilling their religious obligations toward the embryo.

Navigating Loss

The generalized belief in the personhood of the embryo and the individualized attachments that women formed with their own embryos raise questions about using ARTs, which often result in embryo loss. Only a quarter of the women in this study voiced that they had ethical or moral concerns with IVF technology prior to deciding whether they would use it. The other three-quarters of the women voiced no ethical or moral concerns with IVF when considering treatments. When concerns arose for these women, it was often during treatments, where they were confronted with ethical dilemmas. In this section, I examine why many women stated they did not have moral or ethical issues with IVF, despite their belief in the sanctity of the embryo, and their different ways of navigating and makes sense of ARTs and embryo loss. To reason through embryo loss, women again invoked the ideals of femininity that were used in forming attachments.

One reason that the majority of women did not see a conflict between their belief in the personhood of embryos and IVF technology was their views about the purpose and meanings of the technology. As one woman explained, “IVF is going the other way. I don’t think that’s close to abortion at all.” IVF technology and clinics are intended to *create* parents, children, and families. Embryo loss is often part of the family-building process in IVF clinics. But the meaning attributed to technology and its growth emerges from and reinforces cultural ideologies of the importance of the biological child and of biological motherhood as an achievement of womanhood (Becker 2000; Greil 1991; Sandelowski 1993; Thompson 2005). The vast majority of the women invoked these very ideas—IVF as a technological means to making families—when explaining why embryo loss in an IVF clinic is fundamentally different and at times acceptable. As one woman put it, “I don’t see it as not valuing of life to try [IVF], because...our

doctor's perspective is, 'you want kids, and children—families—are good things, so let's try to give you kids.' It's not just a flippant thing." Embracing motherhood and pursuing it through treatments assigns different meanings to embryo loss as an undesirable but necessary step in the process of achieving motherhood.

Barbara, a Midwestern woman who works in the medical field, has undergone four rounds of IVF, and said she will continue treatments as long as she can afford them, explained the difference between embryo loss during IVF and embryo loss at an abortion clinic:

I am opposed to abortion completely, one hundred percent. Even probably in cases of like rape....Like the way I justify it is that this is—I want this baby. Like I'm not throwing it away. I'm trying to create. I'm not trying to destroy.

Barbara's intentions to create a family and her embrace of motherhood give embryo loss in the technological pursuit of family building a different meaning and moral valence than embryo loss in other settings, such as in abortion or in embryonic-stem-cell research, which most of the women in this study strongly opposed. Barbara described an assumption of a different valuing of the embryo as a desired child versus a woman who "throws away" her (potential) child. In making this assumption, Barbara frames infertility treatment as an enactment of good motherhood.

When I asked about the lack of adequate insurance coverage for infertility treatments in the United States, many women invoked this same reasoning in their objections to the Affordable Care Act²³ and abortion coverage. As one woman stated, "I have a huge issue with [lack of

²³These interviews were completed during the Hobby Lobby court case (*Burwell v Hobby Lobby*) over the Affordable Care Act's coverage of birth control, which Hobby Lobby, who is owned by evangelical Christians, claimed caused abortion. Representatives of Hobby Lobby defined the beginning of life as being marked by fertilization rather than by the period of implantation, which is the federal definition (Gold 2005).

coverage for infertility treatments] because if my insurance can cover ending a life, I do not understand why it cannot provide a life.”

Like many of the women who used ARTs, Barbara was more conflicted about embryo loss in discussing her own experiences with ARTs. For example, when I asked about her thoughts on preimplantation genetic diagnosis (PGD), she struggled with the possibility of discarding pre-implanted embryos that had genetic abnormalities:

If they're abnormal, chances are they're not going to make it. You're trying to avoid heartache. I'm very conflicted here. I wouldn't want to throw it away. I just don't know how I'd feel if the baby wasn't implanted yet, even though I believe that life begins at conception [laughs]. [Infertility treatment] does a number on you, what you think or what you think you would do, or what you're even open to. You don't know until you're put in that position [...] I hope I never to have to experience [miscarriage] again, and so I can better mentally handle not using an embryo [with genetic abnormalities] because I've already lost, you know, eleven [pauses]. It would be easier not to use it in that situation versus using it, getting pregnant, and then miscarrying anyway....I'm trying to be as honest as I can, even though like I'm saying it out loud and I'm like, oh my God [laughs], this sounds horrible. But it's the way I feel.

The heartache Barbara refers to in the excerpt is her own. The emotional turmoil she experienced through repeated failures with IVF made her seriously consider whether she would discard a hypothetical embryo with genetic abnormalities. Barbara's struggle over tensions between her experience of loss and her beliefs about discarding embryos illustrates the tensions in the moral reasoning of women who struggle to sustain their desire to be good Christian women, who embrace motherhood, with the loss that often results from pursuing motherhood through ARTs. Barbara's experience using IVF produces a potential moral shift in her thinking about embryo loss in the context of IVF.

Lisa, who earlier described God as providing a guiding hand during IVF for her embryos to implant, also invoked intent to draw a distinction between embryo loss in IVF, abortion, and embryo research, but she still struggled that some of embryos created were not used by the doctors, some did not implant after transfer, and four remain frozen:

Do I sometimes battle with and feel guilty about it in the sense that...it's essentially all these lives that are created and don't...make it? Yes. But I don't view it...as abortion. I don't view it as destroying an unwanted life, because all of these embryos are wanted very much. Well, for me anyway. You know, like we very much want children from this process, and we wouldn't destroy them, because yes, I do—I do kind of view that really badly. Because I don't think they were given even a shot, the ones that were destroyed. Yeah, I don't agree with that. I don't know if I'd go so far as to call it abortion. I don't know, essentially that's what it is, and then donating to science, essentially they're terminated after they're all done testing, so I don't agree with that either....My mom is the opposite, she tries to tell me all the time it's just a cluster of cells, but I keep thinking, well, my son was just a "cluster of cells," you know? And here he is. So that we went through so many embryos bothers me....I really struggle with that, so I have a hard time with my religion and that part of infertility with the embryos.

While she struggled with guilt about creating embryos that did not survive, the important difference for Lisa is that in the context of IVF, those are *wanted* embryos, which required great financial, emotional, and physical effort to create. Each could be the (future) child that patients so deeply long for and go to great lengths to create in the hopes of a successful pregnancy. Lisa is opposed to creating or donating embryos for any purpose other than family building because in those contexts they are not wanted *as children* and were not given an opportunity to become successful pregnancies.

Lisa highlights women's different intentions about whether motherhood and family building are embraced or rejected as a key distinction in determining whether embryo loss in abortion, IVF, or embryo research is morally licit. But those distinctions were not always clear-cut for women like Lisa, particularly for those who personally experienced embryos loss due to

embryos being discarded, not implanting, or not surviving thawing. A successful pregnancy following embryo implantation also complicated these distinctions. For instance, one of those embryos did become Lisa's son. The effort and attachment she felt toward them contributes to her difficulty with their loss. Lisa thus struggled with clearly delineating these losses from the losses in abortions.

A few women echoed these struggles when they said they avoided thinking through the challenges of embryo loss in IVF. As one woman said with a laugh, "It's easier not to think about it." Others were relieved to not have extra embryos and the difficult decisions that would result. As one woman explained:

If the embryo doesn't survive because of natural causes, I see that differently than if the embryo doesn't survive because we're choosing to discard it and get rid of it These are tough questions [laughs]. Yeah, infertility is a huge, huge ethical [laughs] dilemma. I'm glad we got our kids and we didn't have to . . . make those decisions, because they're . . . so hard when you, like me, believe that the baby is a baby when it's fertilized.

Claire, who has been experiencing infertility for over a decade and has undergone IUIs and IVF, talked to her pastor before treatments. He discouraged her from discarding any embryos. She had limited rounds of insurance coverage for IVF, so during her second round of treatment, she transferred all five of her embryos to her body at one time. She worried that if she froze them for later use, her insurance coverage would run out. If all survived the transfer and implantation, she would have been pregnant with five embryos. While none ended up surviving, the thought of being pregnant with five embryos and being opposed to selective reduction created a dilemma for her, as she explained:

I think we were so caught up in "Let's just have this work and who cares," because there was so much desperation that we wanted it to work that we'll address [multiples] if it happens I think honestly when someone is going

through infertility treatments, they get so caught up in the process and it working that they don't necessarily fully consider what there could be[...] there's no way. I could not imagine doing selective reduction. There's no way I could.

Claire described the desperation she and her husband felt toward wanting to have a baby. At the time, that goal of having a child was of utmost importance. But once they transferred the five embryos, she described how scared she was that she would become pregnant with five. She even visited the selective reduction forums on some infertility message boards because she could not imagine being pregnant with more than triplets. But the embryos did not implant, and she felt relief. This example illustrates the conflicted position some women find themselves in—pursuing their desire for motherhood but sometimes finding themselves in situations where they consider interventions, such as selective reduction, that violate some of their deepest held beliefs about abortion.

While they were in the minority, those who had ethical and moral concerns with IVF prior to undergoing treatments typically cited concerns with creating extra embryos that had to be disposed of, intervening in a “natural” reproductive process, or impinging on God's role in that process. Women who expressed such concerns to their doctors were often met with disapproval. As one woman who refused IVF explained, “The medical community likes religion if it holds you together emotionally, but they don't like religion if it interferes with treatment.” Some of these women pursued embryo adoption instead of IVF because they had no role in the creation of adopted embryos but could facilitate the embryos' removal from a frozen state. Some considered doing IVF in an “ethical way,” which they interpreted as limiting the number of embryos created and using all of them, thereby avoiding issues that might arise with extra embryos. But as one woman explained, given the cost of each cycle of IVF and its low success rate, limiting the number of embryos “is not cost effective.” Maria, who underwent IVF and

embryo adoption, explained that her concerns about embryos affected how she approached treatments:

We felt very strongly that we didn't want any embryos discarded, so that meant, after they fertilized abnormally...we did not want them to discard those embryos without letting us know. Typically if an embryo stops growing, they'll just take it out of the Petri dish, discard it, and we asked if they would wait twenty-four hours from the point that they noticed it was not growing anymore before they discarded it. We never had a situation where that had to happen. Of our biological embryos, they took six eggs from me, and only four of them fertilized, and those four we put in me at different times, and so we never had that decision to make.

She continued to describe a friend's IVF experience:

Another friend...wanted to freeze all her embryos that were still growing on day six, regardless of their quality, and her doctor told her that none of them were good enough to freeze, and discarded all of them before he talked to her. So they were still growing. They just weren't growing as fast as he wanted them to, so that infuriates me, because you know, as Christians we have ...a very strong belief as far as when we enter the process of IVF of...the sanctity of life, and we're determined to protect that, and then our doctors just disregard what we say. So now she's living with—she had eleven embryos the doctor discarded. So in her mind, she has eleven children that were basically aborted.

In constructing a justification for suing doctors for what she considers to be their ethical breach, Maria switched to the legal definition of embryos as property rather than persons. She, like many of the women, were disturbed that embryos are viewed as property under US law. But Maria also viewed invoking the language of property and using legal channels as a strategic way to punish doctors for discarding what she considers to be life:

For a doctor to say, "We're just going to flush [the embryos]" and do it without the consent of the person, that doctor has just destroyed fifteen thousand dollars of personal property without the consent of the owner....I really wish someone would sue one of these doctors for doing it.

In the case of embryos being discarded, the difference between a patient's and a provider's definition of what constitutes life can have dire consequences.

Elaine, a homemaker from the South who eventually adopted a child, described her Southern Baptist church as instilling a mentality that if IVF is pursued, “it should be handled with caution, with faith, and with a mentality of trusting in God and valuing the sanctity of human life, very similar to how our church would feel about abortion and that sort of thing.” She later explained that she felt that IVF was akin to abortion when embryos are destroyed:

Like destroying an embryo...I think of like an early abortion or a morning-after pill. If I think of that as an abortion, and being wrong, it would be a little bit of a double standard to not think that...the destroying of an embryo isn't accomplishing the same thing, which it essentially is.

While ethical concerns with genetic testing on embryos and sex selection were common among all of the women in the study, strong sentiments of opposition to the technology, such as Elaine's, were unusual.

Taken together, these data demonstrate the tensions surrounding religion, IVF technology, and gender for some women. Enacting cultural ideals of femininity by embracing motherhood, pursuing fertility treatments, and forming maternal bonds with embryos can result in turmoil surrounding embryo loss. However, for many, it is the very enactments of valued forms of femininity—such as embracing motherhood—that make embryo loss an undesirable but sometimes necessary part of achieving motherhood through IVF.

Naturalizing Loss

For most women, embryo loss was equated to unsuccessful early pregnancies in “natural” reproduction where family formation is pursued without ARTs. In addition, embryo loss was often not in tension with religion but was understood as part of God's divine orchestration of life on earth. Given that women described God as providing signs that fertility treatments were the path he intended for them and understood the technologies as instruments provided by God, it

followed that they saw God as determining their outcomes, which meant that at times, embryos would be joining him in heaven. For the women in this study, the process of making families with technologies that result in embryo loss is, in the end, about creating families; loss is often part of that process. Whether inside the clinic or outside it, pursuing parenthood is about making families.

Equating embryo loss in the IVF clinic to very early miscarriages—referred to as “chemical pregnancies” by the medical community—naturalizes the loss in the clinic as akin to loss outside of the clinic. As Barbara explains, “There are eggs all the times that people just regularly—Like some women may have miscarried and they don’t even know it, because the embryos never developed that far.” My use of the term “naturalize” does not suggest that the technologies are “unnatural.” Rather, I use the term to illustrate the work women do to make technologically assisted reproduction equivalent to procreation through intercourse, where they apply idioms of nature. Both in and outside the lab, “natural” processes decide which embryos develop and which do not. For these women, it is technology that makes them aware of early-stage embryo formation and loss in the clinic.

Lee, who had ethical concerns about IVF and the handling of embryos before using it, searched for a Christian doctor from a website that listed pro-life Christian doctors. Lee, who also used embryo adoption, drew on frameworks of reproductive processes without ARTs to explain that embryo loss during the thawing process is essentially the same as embryos that do not implant or result in miscarriage during unassisted reproduction:

I struggle a little bit with the idea of—I mean, because when you do create embryos, they don’t all typically survive when you thaw them. But [sighs] I think there’s a difference between just creating them—my husband would use the phrase “willy-nilly” [laughs]—and being very careful, and limiting the number

and stuff like that. It's—it's hard. I mean, when it comes to like having kids naturally, my process of thinking has been, we don't know how many times a woman gets pregnant, like conceives, but it doesn't attach. That happens naturally all the time. So the fact that we're using embryos and then they don't attach, to me—It's sad, because we lose those kids, but at the same time, that happens all the time, so it's not completely going outside of...how...life works normally.

For Lee and many other women, it is the intended use of the embryos and the context of their loss that determines the moral acceptability of the loss of life. When a thawed embryo that is intended for pregnancy does not survive, it is akin to a "natural" process of reproduction that also occurs for those who do not use ARTs. In contrast, when those embryos are used for research purposes, Lee sees the embryo as being instrumentalized for non-procreative purposes, thus devaluing it as a (potential) life and its loss is no longer viewed as within the bounds of nature.

A few women drew on biological frameworks to naturalize loss through a process some doctors offer that is referred to as “compassionate transfer,” whereby an embryo is transferred to a woman's body at a time when she is not ovulating, which would make pregnancy extremely unlikely. The phrase “compassionate transfer” itself draws on gendered notions of good womanhood as being compassionate and nurturing. While the embryo is placed at an inopportune time for conception, it is nonetheless put in the woman's body and technically “given a chance,” even if that chance is miniscule. Laura, who had done IUIs and IVF, referred to “compassionate transfer,” though not by name, when I asked her about PGD and what she would do with an embryo that tested positively for genetic abnormalities:

I would still have it implanted but just at an inopportune time so that that way, at least it's inside of me and it—even though I know that the chances of it taking are slim to none, at least then it's—it's still inside me. It's not just throwing it away in the trashcan or a biohazard bag...I think it's the fact that—if it's a survivor that's meant to be, then it's meant to be. You know, if that's what God wanted me to have, then who am I to say no? And especially if it survives all of that and still makes it, then who am I to say no? Who am I to put that kind of judgment? So it's more of that than it is anything else—more of God's will.

By transferring the embryo to her body during a period with little likelihood of pregnancy, Laura drew on her belief in God's divine will and miraculous ability to make pregnancy still possible. The embryo's fate being in the woman's womb, a site often associated with cultural values of femininity such as nurturance and protection, stands in contrast to a biohazard bag—a site of waste located in a sterile, clinical environment.

Appealing to God's will was common in the women's accounts of embryo loss. Given that women described God as the “author of life” and infertility as being part of his divine plan for their lives, God's divine will in the creation and ending of life aligns with their view of God's sovereignty. For example, while Lisa earlier expressed guilt that some of her embryos did not survive the IVF process, she ultimately explained that God determined the embryo's fate:

It's like, if I don't put [the embryos] in, these lives, they don't have anywhere to go from there. There's no choice. If you don't put them in, they just die. But once it's put in, it's then in God's hands. I've done my part. And my body is doing its part, and it's God's choice whether they take or not....So yeah, I'm doing up to my part there, but if you don't do anything with them, and you destroy them, that—I mean, that's it. They'd never even be given a chance, but once they're put in my body, they've been given a chance and God decides.

While “God decides” the embryo's fate, Lisa explains that she must “do her part,” which includes offering a chance for life within her body. Lisa enacts a religious and maternal obligation to give an embryo an opportunity to live. She is embracing the possibility of motherhood and demonstrating that she has done everything possible to become a parent: enduring treatments to create an embryo, emotionally attaching to it, and transferring it to her body to encourage its further growth. But should it not survive, the reason would not have been her pursuit of biological parenthood. Rather, as she explains, it was her pursuit of IVF that offered the embryo a chance to live.

According to some women, embryo loss can be a means of transitioning the embryos' from earth to eternal existence. Jamie, an evangelical woman from the Southeast, describes God as making her infertility a “joyful” journey that spanned over two decades. The Bible was her lifeline during her experience, and she explains that God planned every detail, including “making provisions” when a wealthy acquaintance wrote a check to her and her husband to pay for their embryo adoption. Some of the adopted embryos that she transferred to her body did not attach to her uterine lining. In responding to how she thought about the embryo loss, she explained:

Some embryo mommas I know call those “miscarriages.” But I don’t see it as one. I saw it as something that would have happened naturally had my husband and I conceived a child naturally that never implanted or something went wrong. It never implanted, so that wasn’t exactly a miscarriage²⁴. The other thing that I never thought of until communicating online with people who have been through this is that even though the frozen embryos were thawed, transferred, and didn’t implant, they’re not in limbo anymore. They’re up...in heaven with Jesus. They’re released, they’re there. Those six that we adopted that didn’t make the thaw. That was my first thought...[that] we gave them a chance to live. But they didn’t make it through that process, but they’re no longer in a state of frozenness and waiting. They had that breath of human air around them, and now they’re free spirits in heaven. That’s my take.

Jamie understands the embryo loss as a means for them to becoming spirits in heaven, a process through which her decision to adopt them rescued them from a liminal state, neither fully living or departing from earthly existence. As one woman put it, “[Freezing is] not killing them, but it’s not letting them live.”

Maria adopted four embryos from another couple. From that embryo adoption, one embryo implanted successfully and produced a child, one did not implant, and two embryos that were fused together were frozen for future use; because of a cracked vial, the fused embryos did

²⁴ Pregnancy is normally understood as occurring when the embryo implants into the uterine lining. Embryos can form in unassisted reproduction but never implant in the uterine wall. Those who argue that forms of birth control are abortifacients define pregnancy as the fertilization of the egg, even before implanted in the uterus.

not survive the cryopreservation process. Maria explained that before she found out that the vial had cracked, she agonized over decisions to thaw the two remaining adopted embryos that were fused together. When she gave birth to her son in the previous cycle, she suffered complications that would not allow her to survive a pregnancy with twins. So she had to decide how to use the frozen fused embryos without harming them. She consulted with embryologists, but in the end, the vial cracked before the embryos could be thawed. She then adopted embryos from another family. Maria explained that all this may have been “God’s plan”:

When my son’s embryo mom, when they made their six embryos, when each of those embryos sparks into life, God knew she only needed two of them, and he knew I was going to get the other four and that that was going to serve a purpose in my life. He had purpose in there, the creation of their life, and so I don’t think it was an accident at all, and I think when for non-procreative purposes he created that spark, he knew exactly which ones I was going to get and which ones were going to end up in heaven with him. And so...it can’t be an accident that the vial was cracked. I probably wouldn’t have adopted two embryos, but four sounded like the perfect number. But I just—I have to believe that God allowed that vial to be cracked, he took those babies to heaven to be with him, because there’s...another child out there that he has purpose for it. You know, one that has probably been frozen longer, you know, been around for nine years. I think this embryo we’re about to adopt is seven or eight years old, which is crazy, because that baby, my youngest, is actually going to be the oldest, because my daughter was born in 2009, my son was created in 2007, and this embryo we’re about to put in, I think was created in like 2004. So we’ve had the birth order all mixed up all over.”

In Maria’s account, God orchestrated all of the details of which embryos would survive and which would not so that the family that he intended would be created, including embryos from two different couples and a non-traditional birth-ordering resulting from cryopreservation. So while Maria was initially devastated when the vial cracked, she understood the meaning of that loss as akin to a sacrifice for an embryo that was more in need because it had been frozen longer than those that did not survive cryopreservation. Embryo loss was thus a necessary part of family formation.

Obligations to Religion and Embryos

While it may appear that these women are invoking God's will in a fatalistic way, where everything is divinely predetermined, such an explanation does not account for the obligations and responsibilities they feel to God and to the embryos they form attachments to. It is in working toward fulfilling these responsibilities that we again seen enactments of gendered moralities—values associated with what it means to be a good woman and mother. In fact, that is why many of these women were initially surprised that they were experiencing infertility. They had “done everything right”—college, marriage, a good job—and felt entitled to motherhood, in comparison to teen moms, for example, whom they viewed as irresponsible and, by extension, less entitled. So God was indeed a sovereign power that intervened on earth, but fulfilling his divine plans meant people needed to behave in particular ways, as Barbara explained:

I believe that life begins at fertilization, and as long as the cells are multiplying and the embryo is growing, it's alive. And everything should be done to protect it and to continue the growth of that life. Once the embryo—once the cells stop growing and stop and, by extension, less entitled reproducing, then it has died, and so I have done IVF three times. I think God is the author of life, and he gives life, and he takes life, and as long as we are stewards of that, we should do...the most we can to protect that life. But I don't see where the Catholic Church says not to do IVF. I don't agree with that. I do think that we do have a responsibility before the Lord to do everything we can to protect that life while we are stewards of it, which, you know, supports the stance of embryo adoption afterward. I just—I think—I tell my friends, there are several points in an IVF practice as a Christian that you have to be very careful, and you have to know your doctor really well.

Although Barbara invokes God's sovereignty, she does not have a fatalistic view of her place in the world, according to which all details are solely determined by God. Rather, in her relationship with and understanding of God, she feels an obligation to protect that which she understands to be sacred—the embryo—so that God's will can be fulfilled in the way he intended.

Others had different understandings of God's sovereignty and its role in their loss. Joan, whose son was stillborn at six months, explained:

I don't believe God knew my son was going to die, so when people tell me that God just wanted my son to be home with him in heaven instead of here with me, those kinds of things are hurtful. I have to remind myself that I have a different theology than they do, and I find more comfort in my theology [laughs]. And I feel like I have a better picture of a kinder God, so I hang onto that. I really believe that God is kind...I don't think that everything that is going to happen has already been decided on. I think the future changes based on decisions that people make—and people can make decisions on their own, and they're not made to make a specific decision, so because of that and the fact that people can make their own decisions, that's why I don't believe that God knows everything about how the future is going to turn out.

For Joan, because people's actions shape earthly existence, all is not predetermined by a divine power. Her understanding of God and nature according to his will is that he would not knowingly take her son from her, which would conflict with her understandings of God as loving and kind. As she explained further:

Knowing that God didn't want my son to die is a really important thing. Because while I was pregnant I really—I would pray for my son, and I would pray that he would be a great man, and I would ask God what sorts of hopes and dreams should I be having for him? And I felt God telling me different things. I felt God growing in my heart, a picture of what my son would be, and I don't think that God would do that if he knew my son was going to die.

Joan's understanding of God's role in the loss of her son was also likely shaped by the circumstances of her loss. Joan's son was a wanted pregnancy in which the fetus was growing in her for six months, not an embryo that did not survive a thaw. This likely affected her experience of loss and the quality of the attachments she formed.

For other women, fulfilling one's obligations to God is a means to maintain kinship ties through being reunited in the afterlife with children and embryos they lost. Sarah, who lost embryos in the thawing process, explains:

We're thinking that those babies might all be up in heaven, so instead of just the two that I miscarried, I may have a total of thirteen up there. But that'll be something that I won't know until, you know, that day comes. But, I mean, we— We think, you know, because they were a baby, and they didn't make it, so I'm sure God would have adopted those just like he did the rest after you carry them.”

Sarah understood infertility and her losses as part of God's plan in that she was meant to minister to others with fertility issues. She explained that she kept God close and does what she believes he wants her to do so that she can be reunited with the embryos that God “adopted”:

There's just a peace knowing that one day if I do what he wants me to do, I'll see my babies again. That's the biggest thing, I think that keeps me close to him, knowing that I will see them again one day. I read that *Heaven Is For Real* book and after reading that, I just had so much confidence and trust that there is—my babies are there, even though they were never born, and I've never seen them other than ultrasounds. I know that they're up there, because I read a true story that the little boy [who died in the story] seeing his sister that he had no idea was even ever there, so that kind of—that's what I cling tight to, and if I do get discouraged or whatever, I just think of that and that I need to be strong, and I need to ask God to help me so that one day I'll be with all my children.

Sarah understands herself as fulfilling a maternal obligation toward maintaining ties with her kin, who are under the care of a God that she understands to be their ultimate protector in her absence. Religious obligations in her relationship with God are fulfilled through enactments of values of white, middle-class femininity that define what good womanhood and motherhood are: embracing motherhood, nurturing, protecting, and being selfless toward one's child (one's embryo, in this case). Although women struggle with these being in tension at times, such as during embryo loss, they often draw on these same gendered ideals of femininity to reason through them.

The women in this study often understood ART-related embryo loss not as an abdication of maternal responsibilities but as a result of a profound embrace of motherhood via the use of ARTs and as a religious obligation toward God and his divine will. Such a view is made evident

in their efforts to maintain kinship ties with embryos that they view as their children, whether they exist in wombs, Petri dishes, cryopreservation tanks, or heaven.

Discussion

This study has shown how Evangelical Protestants hold two seemingly competing views: deep opposition to abortion²⁵ and stem cell research on the grounds that the embryo is human life and support of technologies like IVF that result in embryos routinely being destroyed. I show that for many of the women, these were not contradictory positions. In fact, women invoked religion as a reason for pursuing such technologies; many describing God as guiding them towards this decision, a finding that challenges underlying secular assumptions about infertility and ARTs in the United States. Additionally, gendered frameworks were used in reasoning through why embryo loss was compatible rather than in contradiction with some of their mostly deeply held beliefs about the moral status of the embryo. Women's discussion of embryos in the context of IVF were suffused with gendered enactments of culturally valued forms of femininity.

Mobilizing these gendered ideals prepared women to envision themselves as mothers, to achieve longed-for attachments and kin relations, and to resolve tensions between gendered ideals and embryo loss resulting from ARTs. Many considered embryo loss to be inevitable—albeit undesirable—in their pursuit of motherhood. Infertility and embryo loss were at times viewed as instrumental, rather than as impediments, in realizing the kinds of families women believed God intended for them. Women frequently described their intention as the creation—not the destruction—of embryos when using IVF technology, thus embracing rather than rejecting

²⁵ While the overwhelming majority of women in this study were strictly opposed to abortion, they still supported women's legal right to abortion. They would often say things like, "It's [abortion] legal. It may never be a choice for me, but that's their personal choice that they will one day need explain to God."

motherhood. Some framed embryo donation in altruistic terms, seeing it as helping couples in need or furthering scientific knowledge, while others viewed it as a form of abandonment.

However, tensions within their constellation of beliefs surfaced in women's narratives, but rather than reflecting inconsistencies in their moral reasoning, they can be seen partly as manifestations of tensions at the broader level of conflicting cultural messages about gender ideals. For instance, how does one sustain one's profound desire for motherhood through the pursuit of technologies that often result in embryo loss, while striving to be a good, Christian woman who ascribes personhood to the embryo and advocates against its destruction in other settings? The process of attempting to fulfill the obligations of "good" motherhood, and by extension womanhood, can at times place one at odds with those very ideals. A "good" woman and mother is defined as one who is emotionally attached to her (potential) child. But enacting such ideals often resulted in women forming immediate attachments to nascent life as kin, creating additional emotional turmoil when embryos did not survive. By drawing on cultural ideals of femininity in their moral reasoning, the women were still able to construct themselves as deserving of motherhood.

The women's complex moral reasoning adds to our understanding of how people engage ethical questions regarding the status of the embryo, which are so often drowned out by the dominance of bioethical debates rooted in abstract, philosophical understandings divorced from the emotional and embodied experiences and social contexts that are at times central to people's understandings of what constitutes life and when it is permissible to end it (Rapp 2004). The contingent and contextual meanings of the embryo in evangelical women's accounts depended on factors like purpose and intent in using technologies. But context in terms of the space of the clinic and kinds of patients inhabiting it also matter. Cultural ideals about what constitutes a

good mother are rooted in classed and raced ideas of white, middle-class womanhood (Bell 2010, 2014; Earle and Letherby 2003). White, wealthier women pursuing motherhood and family through ARTs are fulfilling gendered ideals, even when that pursuit results in loss that would be considered morally reprehensible by many, including these women, in other contexts. The uneven moral outrage and varied meanings of embryo loss add to other studies showing that the meaning and status of the embryo is contingent and not universally about life or not life, even in contexts where public discourse frames such debates as such (Kaufman and Morgan 2005; Morgan 2003, 2009, Roberts 2007, 2012).

This study thus provides a vantage point from which to understand why those who seek abortions are often understood to be violating the norms of “good motherhood” and, by extension “good womanhood.” The fertility clinic and its largely white, middle-class clientele are shielded from the moral condemnation that abortion clinics face because the loss of embryos occurs in a space where women are striving to become mothers. This study suggests that the fertility clinic and the abortion clinic—and their patients and practitioners—occupy different spaces within the moral hierarchies of the stratified system of reproduction (Colen 2009).

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CHAPTER 4

Contested Conception: Comparing Catholic and Protestant women's encounters with assisted reproductive technologies

Introduction

Technological advances in assisted reproductive technologies²⁶ (ARTs) pose ethical and moral questions, particularly for those who assign sacred meaning to events in the cycle of life—conception, pregnancy, birth, and death. Whether or not religious authorities accept or reject these technologies is often determined by whether they help realize or challenge religious conceptions of nature, family, kinship, gender, and sexuality (Traina et al. 2008, 29). For example, Islam and Judaism privilege biogenetic kinship, and their religious authorities are more accommodating of ARTs (Wahrman 2005; Inhorn 1994). Although religious institutions and their positions on moral issues are unquestionably important in shaping public attitudes, political debates, law, and policy, it is important to also examine religious people's interpretations of these teachings and technologies in the contexts of their everyday lives, where they “actually live their faith” (Lustig, Brody, and McKenny 2008, 4).

This study examines Catholic and evangelical Protestant women's views of and experiences with ARTs such as in vitro fertilization²⁷ (IVF). The vast majority of the women in

²⁶ Assisted reproductive technologies are technologies that assist in conception that does not involve heterosexual intercourse (Traina et al. 2008).

²⁷ In vitro fertilization (IVF) is a fertility treatment that involves hormonal stimulation of a woman's ovaries to produce more eggs than one would normally produce during ovulation, surgical removal of the eggs, which are then individually mixed with sperm (from partner or donor) in a Petri dish in the lab. Embryos that are deemed well-developed by physicians are then transferred back to the woman's uterus. “Low-quality” embryos are often discarded. Pregnancy is achieved after the embryo successfully implants into the uterine wall.

this study ascribe personhood to the embryo and are opposed to abortion. I find that although these groups of women are often assumed to be the same in their pro-life views, their views about IVF, and embryo loss that occurs as a result of it, differ dramatically. Assumptions about these groups of pro-life women as undifferentiated result from a few factors. First, both groups believe in the moral sanctity of the embryo as a person. Second, these groups have historically been allies in advocating for the protection of the embryo and fetus. Since the 1980s, beginning with Jerry Falwell's Moral Majority, socially-conservative Protestants and Catholics emerged as a united political force in American politics in their stance against abortion, and later in their opposition to human embryonic stem cell research, and euthanasia in the case of Terri Schiavo (Goodstein 2005). While people often draw inferences about religious people's views from public political controversies, in doing so, one overlooks differences and the reasons for them between and within religious groups. As gender scholars have shown in their criticism of essentialism in many areas of gendered life and scholarly work, it is important not to essentialize the views of religious women.

Given the complex religious, political, and economic terrain of life politics in the United States, this study uses ARTs as a vantage point to examine how religious people navigate two institutions of authority—religion and science—in their experiences with infertility and ARTs. While the Catholic Church is unequivocally opposed to ARTs like in vitro fertilization (IVF), Protestant groups, who oppose abortion on the grounds that life begins at conception (often before implantation), have been largely supportive of IVF. This support appears especially striking when one takes into account the fact that fertility clinics provide a supply of embryos for research, which both religious groups oppose, and that embryos are discarded in large numbers due to IVF's low success rates (Roberts 2012). What accounts for these different approaches to

ARTs? This study examines this question by exploring how Catholic and evangelical women engage with these technologies. These groups face two different potential dilemmas in their relationship to ARTs. Catholic women experiencing infertility are subject to religious restrictions on their use, eliminating one means of realizing the highly-valued possibility of a biological child. Evangelical women have fewer religious restrictions on using ARTs, but must still contend with the fact that they routinely result in the loss of embryos. This study asks how religion, technology, and gender inform how evangelical Protestant and Catholic women grapple with these dilemmas. More specifically, how do they think about the relationship between God and reproductive technologies, and how do they come to terms with embryo loss and treatment failure?

Drawing on in-depth interviews with seventy-five Catholic and evangelical Protestant women experiencing infertility, I argue three main points in this paper. First, Catholic and evangelical Protestant women had different views on how life should be created and different understandings of the roles and relationships between God, technology, and themselves as co-creators of life. Second, their divergent understandings of ARTs resulted in differences in how they related to embryos as life. Catholic women viewed embryos in absolute terms as life that should be protected. Evangelical Protestant women had a more contextual and contingent approach to the status of embryos as life where embryo loss was unfortunate but permissible in the service of building a family. Lastly, I found that Catholic and evangelical narratives converge when they move toward non-biological approaches to family building such as adoption.

These findings suggest that these two groups of women, who are viewed as having a uniform pro-life position regarding the moral status of the embryo as life, actually have distinct stances on how life should be created, the circumstances under which its loss is permissible, the

limits of technology, and God's relationship to it. This study contributes to our understanding of how religious sensibilities differently mediate one's relationship with ARTs. Different conceptualizations and configurations of life, nature, and technology inform each group of women's accounts of ARTs. These different engagements with ARTs—refusal or acceptance—both produced emergent religious moralities of Christian womanhood.

Background: Catholic and Protestant Approaches to Assisted Reproductive Technologies (ARTs)

Catholic

The Catholic Church's position on ARTs is derived from an ethical framework of natural law that claims that the laws of nature are inscribed in human bodies and expressed through a "natural language of the body." According to the Church, one such bodily expression of natural law is procreation through marital intercourse (Congregation for the Doctrine of Faith 1961, 447; Traina et al. 2008). The body is viewed as the central site of the unification of the spiritual and the worldly, and intercourse within marriage is understood as an embodied expression of love and the only legitimate site for procreation (Traina et al. 2008). Technologies that separate procreation from marital intercourse thus pose a problem.

Typical forms of fertility treatment (artificial insemination, IVF, use of donor sperm/eggs²⁸ surrogacy) are currently forbidden by the Church. In 1987, the Vatican issued *Donum Vitae* (Ratzinger 1987), the Church's official pronouncement on ARTs that outlines two main points of opposition. First, procreation within the marital union is considered to be a sacred act during which the couple is a co-creator with God. The child is understood to be a gift from

²⁸Use of the couple's sperm/egg is sometimes acceptable as long as the embryo is formed within the woman's body (i.e., gamete intra-fallopian transfer [GIFT] and a special perforated condom is used to collect the semen. A perforated condom is deemed permissible because the small perforations are understood as eliminating the contraceptive purpose of the condom. The Catholic Church opposes contraception.

God. Scientists in fertility clinics are viewed as replacing God and infringing upon the divine nature of procreation by separating marital intercourse from procreation. Reproductive technologies are thus understood as man's dominion over nature.

A second point of opposition concerns the moral status of the embryo. According to the Church, the embryo is viewed as sacred human life from the point of conception. The processes of discarding, freezing, and thawing of embryos are viewed as endangering human life. Unlike the womb, the laboratory environment is seen as artificial and not suitable for the creation of life.

It is important to note that the Church is not opposed to science and technology but imposes limitations on the use of technologies that compromise the "respect and dignity" of human beings (including embryos) or that separate procreation from marital intercourse. Therefore, Church-approved infertility treatments such as "natural protective" (NaPro) technology,²⁹ which involves diagnostic laparoscopic surgeries for conditions like endometriosis, hormonal treatments, and tracking cervical mucus and hormones, are deemed morally acceptable. Traditional fertility treatments, such as ovulation-inducing medications and injectable hormones, are also considered acceptable. In sum, any technology that separates the act of intercourse from procreation or that manipulates embryos ex vivo is forbidden by the Catholic Church.³⁰

Protestant

Protestantism emerged, in part, as a reaction to the Catholic Church's hierarchical authority, which served as a mediator between people and God. Rather than rely on a centralized institution

²⁹ www.naprotechnology.com

³⁰ The Catholic Church's decrees on assisted reproductive technologies are applicable worldwide. However, the way the decrees are understood and Catholicism is practiced varies considerably (Roberts 2006, 2007, 2011, 2012).

of authority like the Vatican as a source of moral authority, Protestant's sources of authority vary among its numerous groups. These sources range from claims of no authority other than one's conscience or interpretation of the scripture to consulting with local religious leaders and councils for guidance (Brody 1990). Protestant ethicists turn to the Bible for guidance rather than appeals to a natural-law framework as is the case in Catholicism (Traina et al. 2008). As Traina et al. succinctly puts it:

It is God's word, not nature, that establishes the boundaries for the exercise of human freedom. Thus, the moral task is to discern what is fitting with respect to God's intentions for procreation as known through Scripture(2008, 36).

Interpretations thus vary for those who look to the Bible as a source of authority on these issues. In the early days of IVF's development, when there was greater public opposition to IVF, Protestant ethicist Paul Ramsey took a strong position against the technology as inherently immoral (Walters 1979). However, today most Protestant denominations view ARTs as morally acceptable within marriage as a means to build families (Greil 1989; Traina et al. 2008). The use of donor eggs, sperm, and surrogacy are more controversial, as some groups view them as violating the sanctity of marriage (Mazor and Simons 1984), though the use of donor embryos, sometimes referred to as "embryo adoption," within marriage is generally accepted. Protestant denominations that are concerned with the moral status of the embryo generally support the use of ARTs, some delineating that harm to embryos should be avoided. Though what constitutes harm is not always specified, it might include avoiding discarding embryos, genetic testing of embryos, and donating embryos for research (Mazor and Simons 1984).

While Catholics and Protestants have different theological traditions and authoritative positions on the use of ARTs, both have potential moral dilemmas regarding the use of ARTs. It

is important to note that for Protestants and Catholics, there is no theological mandate for married couples to have biological children, making adoption an acceptable way to form families. However, this does not mean that couples do not face a cultural expectation for biological parenthood in their local religious communities and from broader society.

Research on Assisted Reproductive Technologies and Religion

The study of the relationship between ARTs and religion has largely been the domain of anthropologists, who have examined official religious positions on ARTs and how the practices and meanings surrounding these technologies unfold in different political, economic, and cultural contexts (Bharadwaj 2006; Birenbaum-Carmeli 2009; Inhorn 1994, 2012; Inhorn and Birenbaum-Carmeli 2008; Kahn 2000; Paxson 2004; Roberts 2012). These studies explore the global diffusion of ARTs from Euro-American contexts, where early studies on the social impact of ARTs examined the medicalization of infertility and the effects of technology on notions of kinship, gender, and family. Research in the United States and the United Kingdom shows that given the valorization of biological parenthood, those with access to ARTs find it difficult to refuse or stop using them (Franklin 1997; Greil 1991; Sandelowski 1991). Middle-class cultural ideologies of class and motherhood leave women feeling compelled to use these technologies (Sandelowski 1991). Technologies are often understood by patients as nature's "helping hand" (Franklin 2002). Though early feminist accounts were deeply critical of ARTs as instruments of patriarchal control (Arditti et al. 1984; Rothman 2000), later studies found that couples engaged with ARTs in strategic ways to achieve their reproductive goals and to form kinship relations (Thompson 2005).

A cross-cultural look at practices and meanings of ARTs outside the Euro-American context challenge the universalizing claims of science and reveal taken-for-granted assumptions about modernity and technology in Western and non-Western contexts. Different configurations of the concepts of life, kinship, and nature in non-Western contexts challenge these as immutable concepts (Roberts 2012). Roberts's (2012) ethnographic account of IVF in Ecuador shows that Catholic clinicians and patients committed to the scientific method simultaneously invoke God as part of the IVF process despite the Catholic Church's official opposition to the technology. To explain this, Roberts foregrounds material realities that shape everyday practices of bringing forth and sustaining life in Ecuador, which lacks a social safety net and is perceived by practitioners and patients as being in a state of failure (Roberts 2012). Roberts argues that in this context, existence is *always* understood as assisted, including by God and technologies (Roberts 2013). In a resource-rich United States, forms of assistance are made less visible in the practice of ARTs because of the valorization of individual autonomy. For instance, Thompson's (Thompson 2005) ethnography of US fertility clinics reveals the "ontological choreography" of making parents and babies, which refers to the overlooked immense work—technological, financial, physical, emotional, and cultural—that must be coordinated to bring babies and parents into being. Unlike in Ecuador, the interdependent resources that make up the use of ARTs in the United States are often overlooked.

Studies of ARTs and religion that show that the "intertwining" of science and religion in the practice of ARTs varies across contexts and depends on whether technological interventions are seen as "with nature" or "against nature" (Thompson 2006; Traina et al. 2008). Some religious traditions accommodate ARTs more easily into their conceptions of nature. In Judaism, for example, flexible rabbinic interpretations of ARTs accommodate the religious imperative to

procreate (Kahn 2000; Traina et al. 2008; Wahrman 2005). Rabbinical interpretations that accommodate ARTs are also used to support pronatalism in Israel, where the state covers the cost of IVF for all Israeli women, regardless of marital status or sexual preference, to reproduce the nation (Birenbaum-Carmeli 2004). In the context of the Muslim Middle East, Inhorn explains that restrictive Shi'a rulings on ARTs were relaxed to allow for the use of donor eggs and sperm if used in a manner that does not violate traditional notions of kinship. This is achieved through permitting temporary marriages between patients and donors, who often never meet in person, to exchange gametes within "marriage" (Inhorn 2006).

Roberts' (2012) and Paxson's (2012) studies are illustrative of people reworking official church doctrine according to the circumstances of their lives in Christian national contexts. Catholic Ecuadorians' conceptions of nature not only involve God in the IVF process but also include regional variation in conceptualizing the status of the embryo as life that could be destroyed or not. Different labor histories led to distinct practices of Catholicism and preferences regarding embryos left over from IVF (Roberts 2012).

In one region, the practice of "kin ethics" resulted in preferences to discard embryos rather than "abandon" one's kin. A different region was characterized by "life ethics," whereby the embryo was viewed as life to be preserved (Roberts 2007). Official religious definitions of nature and kinship are not always how ordinary people make sense of God and technology in the context of their everyday lives. Likewise, Paxson's (Paxson 2004) study of IVF in Greece shows that women use IVF despite the Greek Orthodox Church's condemnation of it. Athenian women imbue their medical experience of infertility treatments with religious beliefs regarding motherhood. Infertility treatments were partly practices of atonement that fulfilled religious ideologies of moral motherhood, by which suffering and childbirth were means not only to

motherhood but to womanhood, highlighting how particular gendered ideologies shape the practice of ARTs and religion.

While these studies have provided a critical, expansive examination of the relationship between ARTs and religion around the world, we know much less about the interactions between religion and science in the practice of ARTs in Western contexts such as the United States, where religion in the sphere of ARTs is largely assumed to be absent despite the estimated 75% of the US population who identify with a religious group, 70% of those as Christian.³¹ But even with religion absent from analyses in these contexts, questions of kinship, nature, family, gender, and life are examined (Becker 2000; Franklin 2002; Sandelowski 1993; Thompson 2005). Given that these are central areas of concern for religious groups, religious people's experiences with ARTs are worthy of additional scholarly examination in contexts where they have been overlooked.

One reason that religion has been largely absent is that prior studies use primarily clinic-based samples (Becker 2000; Franklin 2002; Greil 1991; Sandelowski 1993; Thompson 2005), and those who are religious may be more likely to refuse treatment and to therefore not appear in samples (A. Greil et al. 2010). Another reason is that in the highly medicalized setting of Western biomedicine, religion is assumed to be absent, despite "latent" religious sensibilities constituting the secular itself (Whitmarsh and Roberts 2016). Enlightenment claims to a secularized nature resulted in medicine extricating religion from conceptions of nature and moving it to the sphere of the otherworldly or supernatural (Elizabeth F. S. Roberts 2016).

³¹ <http://www.pewforum.org/religious-landscape-study/>

Although religion has not been the focus of analyses of treatment-based studies of ARTs, religion surfaces in people's accounts of infertility. Sandelowski (1993) finds that religion is most meaningful for women when fertility treatments were financially inaccessible, thus leaving conception "in God's hands." Bell's (Bell 2014) study of infertility among low-income women in the United States also finds that religion was more salient for the less advantaged. Greil (1991) found that patients undergoing infertility treatments were unable to draw on religion to help them navigate infertility. Thompson's (2005) ethnography of infertility clinics noted two instances of religious patients' struggle with ARTs. One religious patient illustrated the rare refusal of treatments; another patient met with her religious leader and doctors to strategize how to undergo treatments in accordance with religious teachings. Both cases indicate the dilemmas that religious patients encounter in their engagements with ARTs. While not a study of infertility, Rapp's (Rapp 2004) study of the complex moral reasoning in decision-making around amniocentesis noted that women often drew on religious frameworks "dramatically and spontaneously" (153-54). Religion was not only a central concern for the women but also a source of material and social resources (2004). Jennings (Jennings 2010), who observed RESOLVE³² meetings, also found that women drew on both medicine and religion in pursuing parenthood. She calls for a more thorough examination of the role of religion in decision-making about ARTs (2010). These valuable but limited insights into religion and ARTs in the US indicate the need for further research that focuses on the religious dimensions of infertility and ARTs.

³² A national advocacy group for couples experiencing infertility: <http://www.resolve.org/>.

Methods

Recruitment

To understand how Catholic and evangelical Protestant women navigate religion and science in their encounters with ARTs, I interviewed thirty-three Catholic women and forty-two Protestant women. I recruited by posting flyers at fertility clinics, cafes, Catholic Social Services, and grocery stores. I also posted online notices about the study on Craigslist, Facebook groups, infertility blogs, and forums. Recruitment was limited to Christian women aged eighteen to fifty who had considered infertility treatments. I used "Christian " rather than "evangelical" to recruit the Protestant portion of the sample because, for some, "evangelical" has negative connotations in popular discourse and "Christian" is a more neutral identifier. Online recruitment was for more successful than attempts to recruit using flyers. This is unsurprising given that infertility is a stigmatized condition, so women may turn to online forums to read about others' experiences and discuss their own. Evangelical women maybe have been more likely to respond to the study than mainline Protestants because websites where I posted the study, such as a site about "embryo adoption," are run by evangelical Christians organizations.

Sample

All respondents were located in the United States except one who was from Latin America and one who was from the United Kingdom. The median age among the Catholic women was thirty-three, and among the Protestant women, thirty-two. Seventy-one of the women identified as white, two as Hispanic, and two as African American. Twenty-eight of the Catholic women were employed and five were stay-at-home parents. Thirty of the Protestant women were employed,

eight were stay-at-home parents, one was a student, and four provided no response to their occupational status.

The combined sample of Protestants and Catholics is comprised predominantly of middle- to upper-middle-class, white, college-educated women from the United States. Demographically, it is similar to clinical samples that prior studies of infertility are based on. It should be noted that the Catholic women had higher income and education levels than the Protestant women: 93% of the Catholic women had a four-year degree or higher, compared to 73% of the Protestant women. The Catholic women also had higher household incomes, with 66% having incomes of \$75,000 or above, compared to 34% of the Protestant women (Table 3). Catholic women's income and education levels are comparable to studies showing who has access to these ARTs and is demographically similar to clinic-based studies on infertility. Protestant women's levels are somewhat lower, though many from this sample had access to ARTs.

Table 3: Catholic and Protestant Participants' Characteristics (n=75)

	Catholic		Protestant		
	<i>Devout</i> n=20	<i>Non-Devout</i> n=13	<i>Evangelical</i> n=36	<i>Mainline</i> n=3	<i>Other</i> n=3
Education					
<i>Less than 4-year degree</i>	1	1	10	1	0
<i>4-year degree</i>	11	7	16	0	2
<i>Graduate degree</i>	6	4	9	2	1
<i>No Response</i>	2	1	1	0	0
Household Income, \$					
<i>20,000-39,999</i>	0	2	3	0	0
<i>40,000-74,999</i>	7	1	21	1	2
<i>75,000-100,000+</i>	10	9	11	2	1

<i>No Response</i>	3	1	1	0	0
Church Attendance					
<i>At least once a week</i>	19	3	29	1	2
<i>2-3 times a month</i>	1	0	3	2	0
<i>Once a month</i>	0	3	2	0	1
<i>Less than once a month</i>	0	6	1	0	0
<i>No Response</i>	0	1	1	0	0
U.S. Region ³³					
<i>Northeast</i>	6	3	2	1	0
<i>South</i>	5	4	11	0	0
<i>Midwest</i>	5	5	22	2	3
<i>West</i>	3	1	0	0	0
<i>Other</i>	1	0	1	0	0
Marital Status					
<i>Single</i>	0	1	0	0	0
<i>Married</i>	19	12	35	3	3
<i>Divorced</i>	1	0	1	0	0
Infertility					
<i>Primary</i>	16	10	34	3	3
<i>Secondary</i>	4	3	2	0	0
Use of ARTs, NaPro, Adoption ³⁴					
<i>Medication (e.g., Clomid)</i>	20	13	34	2	3
<i>Intrauterine/Artificial Insemination (IUI)/(AI)</i>	3	3	13	1	1
<i>IVF</i>	0	6	11	1	1
<i>NaPro</i>	15	1	0	0	1
<i>Embryo Adoption</i> ³⁵	0	0	7	0	0
<i>Donor Egg</i>	0	3	1	0	0
<i>Donor Sperm</i>	0	0	0	0	0
<i>Adoption</i>	9	0	13	0	3
Median Length of Time Trying to Conceive (years)					
	5	2	6	2	4

³³ One Protestant respondent was from the United Kingdom, and one Catholic respondent was from Latin America.

³⁴ Categories are not mutually exclusive.

³⁵ Since the women interviewed primarily use the term “embryo adoption” rather than “embryo donation,” I use the former.

Measuring Religiosity and Classifying Religious Identity

Catholic

For the Catholic women, I used several measures of religiosity that reflect commitment to the Church and strength of Catholic identity (D'Antonio et al. 2001): frequency of attendance at mass, frequency of confession, and a response to an open-ended question about the importance of religion in one's life. These measures resulted in two groups: devout Catholic women and non-devout Catholic women. Women classified as devout attended mass at least once a week, confessed at least once a year, and used words such as "strong" and "extremely" to describe their Catholic identity. Non-devout women attended mass less often (e.g., holidays) and described religion as less important. To confirm my classifications, I sent respondents a follow-up questionnaire to allow Catholic women to self-identify as devout or not. (See (Czarnecki 2015).

Protestant

Categorizing and defining Protestant denominations poses methodological challenges due to the large number of Protestant denominations, and the difficulties of relying on denominational affiliation in determining religious identity. Researchers have therefore offered several classification schemes that incorporate proxy measures to differentiate mainline from evangelical Protestants.

I relied on respondents' own self-identification and Steensland et al.'s (2000) categorization scheme that distinguishes respondents according to denominational affiliation to categorize respondents as mainline or evangelical (see Chapter 3 for a more detailed methodological overview of measuring Protestant religiosity and religious identity). A few respondents who could not be categorized using these measures (e.g., their denominational

affiliation or self-identification was not specific enough) were classified as “Protestant-other.” The Protestant sample was composed of thirty-six “evangelical,” three “mainline,” and three “Protestant-other” women. Since the sample is predominantly evangelical, my analysis focuses on the evangelical portion of the sample unless otherwise specified.

Since this study focuses on religious women’s experiences and understandings of ARTs, the analysis centers on evangelical and Catholic women in the study who identify as religious or deeply religious as they are more likely to view moral or ethical issues in religious terms. Therefore, I do not focus on non-devout Catholics or non-religious Protestants in this analysis. Those who identify as religious are more likely to be aware of religious authorities’ views on ARTs and on the sanctity of the embryo. This is not to say that those who do not identify as religious do not have ethical or moral concerns regarding these technologies, that religion is entirely absent from their experience, or that concerns regarding these technologies emerge only from religious standpoints.

Interviews

Because recruitment via online sources was most successful, I conducted all but three of the seventy-five interviews over the telephone. I asked participants about their families and the importance of religion in their lives, their experience with infertility and treatments, and their thoughts on ARTs. After the interviews, respondents filled out a demographic questionnaire. Respondents were mailed a \$20 Target gift card after the interview.

All interviews were transcribed verbatim. I read all of the transcripts and identified major themes. I used *Dedoose* qualitative data analysis software to create codes of major themes and sub-themes. I used open and focused coding through an iterative process of coding and writing

about the data (Emerson, Fretz, and Shaw 2011). Initial descriptive memos written about the data were later developed into analytic memos that connected themes that emerged through the coding process.

I was sometimes asked at the end of the interview about my own religious identity, why I was researching this topic, and if I had personal experience with infertility. I explained that we know little this topic, that I have not tried to conceive, and that I grew up in a Roman Catholic family, but that I am non-practicing. A few Catholic interviewees were somewhat guarded early in the interview process, asking at the start of the interview what I was looking to prove with this research. I explained that I wanted to better understand their experiences because we know little about their views on ARTs or experiences with infertility, which seemed to put them at ease.

In their accounts of refusing ARTs and their perceptions of negative reactions from the medical community, I began to understand why they may have been guarded. Prior research on infertility shows that it is rare for a person who has access to refuse ARTs. Instead, women with access often have difficulty stopping treatments. These Catholic women had concerns about being portrayed negatively for their religious views on ARTs, which are widely accepted by those in the broader society. As one Catholic woman said in response to hearing my research interests, “I always thought that no one cared or thought that we were stupid and doing the wrong thing.” Protestant women relayed less concerns about being misunderstood for their beliefs and views. This is likely because most of them viewed ARTs in largely positive terms, which does not conflict with the general public’s views.

Findings

Evangelical and Catholic³⁶ women desired motherhood and pursued technological means to achieve it. But their experiences with technology and the meanings they attributed to it, their pathways to motherhood, and their relationships with embryos created through ARTs differed. A significant factor in their different encounters with technology were the different perspectives that their religious communities had on these technologies. The Catholic Church prohibits the use of almost all ARTs, thereby eliminating some technological means for achieving parenthood for those who adhere to church doctrine. Protestant denominational positions on ARTs vary but are largely accepting of their use within heterosexual marriage without the use of donor egg and sperm. While religion is a significant factor in these women's different experiences with ARTs, it is in from their negotiation of religion, technology, and gender that their moral reasoning emerges.

Encounters with Technology: God, Technology, Nature

While one might assume that the majority of Catholics and evangelicals in this study who opposed abortion and believed in the sanctity and personhood of the human embryo would have similar views and concerns about ARTs, when looked at more closely we see that they had different views regarding how life should be created through technological means and different visions of themselves as co-creators in that process. These differences partly emerged from their religious traditions' views regarding human sexuality and reproduction, different degrees and forms of religious authority, and different understandings of God's role in creating life. Catholic and evangelical women related to these technologies and embryos in different ways and with different meanings attached to their decisions to use or refuse ARTs. For Catholics, refusal to use

³⁶ In the analysis, I use "Catholic" to refer to devout Catholic women.

ARTs was understood as a moral act, in that refusal was persevering a particular natural order. For evangelicals, use of the technologies was understood as a means to achieve motherhood through fulfilling God's message to them to use ARTs.

Catholic co-creators

The distinction between the natural and the artificial in reproduction was a recurrent theme in devout Catholics' opposition to ARTs. While the Catholic Church is not opposed to technology and science, it does prescribe limitations on their use, particularly in the realm of sexuality and reproduction. Georgia, a thirty-year-old who had been trying to conceive for six years and has a graduate degree in theology, explained the Church teachings on reproduction:

The Catholic Church teaches that we are not the creators of life. That's the heart of all the teachings on artificial reproduction. I am not creating life. I am just a co-creator. Life is a gift and a blessing. It's not just ours to go out and do on our own... The way I sum up the Catholic Church's teachings is that any method of reproduction that takes away the natural act [sexual intercourse] between husband and wife is just not allowed. For me, I just didn't even consider anything that is outside of the natural act between a husband and wife.

Georgia raises key points about the "natural" and "artificial" from the Catholic Church's teaching on reproduction regarding a human's role in the creation of life. According to the Church, morally licit reproduction is bound to intercourse within marriage, where the couple is understood as being a co-creator of life with God. Procreation that occurs outside of those bounds is viewed as supplanting God and as creating life under conditions that are not prescribed by the Church. While IVF is technically a "virgin birth" in that conception occurs without intercourse, it is not viewed as akin to the biblical story of the virgin birth of Jesus, whose conception was attributed to the Holy Spirit rather than to human actors. The biblical event is viewed as a testament to the miraculous abilities of God in creating life.

Georgia eventually adopted after a pilgrimage to a sanctuary in Lourdes, France, where water with alleged miraculous curative properties is dispensed. Georgia and her husband hoped the water would end their struggle with infertility. While she still has not conceived, three weeks after their Lourdes visit, they adopted a child, which they view as evidence of God's working in their life. One might argue that Georgia is just following the Church's rules. But she points out that Catholicism is a core part of her identity, not just institutional rules one follows:

Yes, maybe [infertility would be easier as a non-Catholic], because there are more doors opened in terms of treatments. But again, being Catholic is such a part of who I am and I believe in these teachings, so it's not just my religion tells me I can't do these things.

Margaret, a thirty-one-year-old Catholic woman, had tried to conceive for four years, underwent several surgeries for endometriosis, and eventually adopted. Margaret found IVF disturbing because conception occurs in clinic rather than through intercourse:

They're not conceived in love, even though the motivation behind them being conceived is, the person wants a baby. I'm sure they will love that baby beyond anything, but they're willing to have their child almost experimented on...A child is a gift and not something to be produced. I just feel like IVF demeans a person so much, because the conception happens not in the throes of love, but rather in a scientific laboratory and it just sounds so disgusting to me that I just can't handle it...and the poor woman has to get all her eggs harvested out. Everything is so... it just sounds so icky to me.

Many Catholic women raised similar objections. Elaine, who had struggled to conceive for four years and eventually adopted, also invoked the natural and the artificial in explaining why IVF technology was morally unacceptable to her:

Each child needs to be born of the love of their parents in an act that is a sexual act not in a lab. When you create babies in a lab it's not in an environment of life, it's in a scientific environment in which you choose the most able [doctors grade the embryos' development and choose which embryo(s) they will transfer to the woman's body]...In the sex act you are open to life and are co-creating with God. When you create a child in a sterile environment you are saying science is far

better than nature.

Elaine defines nature as humans being co-creators with God during intercourse and implies that the grading and selection of embryos is akin to eugenics (i.e., choosing the most “able.”) and thus in opposition to nature.

When I asked the women about couples who felt that doing IVF was a deep expression of spousal love and a desire to create a family, they often said that they empathized with those couples but that intentions did not change what they viewed to be immoral technologies that transgressed the boundaries of how should life be created, as Georgia explained:

I very much sympathize with people trying to conceive. Wanting to have a child, trying to be parents, is a good thing. God wants us to have children when we're married...But in terms of moral teaching, one sentence sums up all of the teachings: it's taking away the natural act between the husband and wife. It's taking God out of the equation...People say, “My intentions are so good.” But I've heard this said once in a class that just because you want a child so badly, you're not going to take one from the grocery store, or a cart, or your neighbor's kid. There's things you just won't do, because it's not right...If it's not moral, then it's just off limits.

For these women, the distinction between the natural and the artificial means that humans are to be co-creators with God only under specific conditions. These conditions foreground the importance of the woman's body in Catholic teaching on sexuality and reproduction.

Given religious prohibitions of conception occurring outside the body, Catholic women engaged in intense work to repair what they viewed as “broken” bodies in order to be co-creators of life within the bounds of what they viewed as natural and moral. They viewed ARTs as not addressing underlying issues in a woman's body. As Marilyn succinctly put it:

I didn't want to go to a non-Catholic doctor because I don't want the pill pushed at me, I don't want IVF pushed at me. I don't want things pushed at me. I want a doctor who's actually trying to help me.

Opposing ARTs does not mean opposing medical technologies. Most of the Catholic women viewed their infertility as a medical condition with divine significance in terms of God's plan for them, as Elaine explains:

The body is made for fertility...If you are infertile and not able to have a baby in that sense, I think there is disease that's behind it. There's something not working. Actually, I find it terribly offensive when people say, "Oh you're thirty-five and you have aging ovaries." My grandmother had eight children and she had the last three over forty. She had in her mind no definition of a limit. And actually I find it very funny because I think we are changing the language so that we work in accordance to the statistics of the IVF clinics, but not actually of how nature and the body behaves.

Tracy, who had tried to conceive for two years and is considering adoption, echoed Elaine's criticism of feeling that fertility doctors are dismissive of the female body's capabilities to have its fertility restored, using ARTs to bypass underlying conditions affecting one's infertility:

Taking the sexual act of procreation out of the equation. That's what I meant by, "you're playing God." The doctor is playing God. Like, "Oh, well, you don't even have to have sex to have a baby. Let's just make one in the Petri dish. Your body's not good enough to do this itself, so we're going to do it for you.

Catholic religious frameworks' focus on procreation through intercourse, in which the spouses' bodies—particularly women's bodies—are viewed as critical components of the creation of life, reinforced a medicalized understanding of infertility, where bodies are viewed as sites where pathologies originate and become the targets of treatment. Though not always in agreement with medical language and treatments for infertility, most Catholic women nonetheless viewed their infertility as a medical condition in need of technological remedies, and they went to great lengths to identify and treat any biological abnormalities affecting their fertility. Some traveled the country meeting with immunologists, underwent multiple surgeries for endometriosis and other conditions, had internal antibiotic washes, intravenous vitamin

serums, and other interventions to heal what they viewed as abnormalities in their bodies that infertility was a symptom of. Several women ($n = 15$) used NaPro, a church-sanctioned³⁷ fertility treatment developed by a Catholic doctor that monitors the woman's cervical mucus, performs diagnostic laparoscopies and ultrasounds, and includes traditional hormonal medications to overcome fertility issues. Any treatment that does not separate procreation from intercourse is deemed acceptable. Women were generally positive about NaPro because they felt it was finding underlying causes for their infertility and was preparing their bodies for procreation through intercourse, as Georgia explained:

I don't feel limited because I want to pursue IVF. I feel limited because no doctors are working towards other treatments besides IVF. I feel like the whole world of reproductive medicine is just all focused on all these artificial methods. People like Dr. Hilgers are so few and far between. They're focusing on me and my body, and getting me healthy so that I can conceive naturally. There's so few doctors doing that. It's hard to find good care... I will do and have done anything I can to get my body healthy and normal, because it is normal for a husband and wife to be fertile. All of these things help restore our fertility, so that when we come together in the natural act, then hopefully we are blessed with a child.

Anna, a twenty-nine-year-old devout Catholic who had tried to conceive unsuccessfully for five years, described recently opening a time-capsule box she made in the third grade that reminded her how long she had desired motherhood:

It asks you a whole bunch of questions about the future... When it asked, "What do you want to be more than anything in the world...?" And then it gave all kinds of options, "astronaut, teacher," and I filled in the blank, "a good mother.".... I graduated my high school valedictorian. So I definitely had ambition to have a good career as well.

Anna sought NaPro and eventually received training to work in a local NaPro clinic. She emphasized its focus on healing the body:

³⁷ While NaPro is approved by the Catholic Church, infertility and NaPro are rarely discussed in local churches. Most women learned about the technology through their online Catholic infertility communities.

They [reproductive endocrinologists] would try to force me into IVF or say that that was the only way I was going to get pregnant. So just starting out with NaPro was unbelievable because from the get-go we knew we were in good hands and that they were going to be working to heal whatever was causing the infertility. And whether or not we conceived, the ultimate goal for us is not for us to get what we want. It's for me to be healthy and for him to be healthy in all senses of the word, not just my physical health, my spiritual health as well, my emotional health. That's exactly what NaPro technology does. It healed the whole person. And it seeks to do that.

These medical treatments were viewed as being in the realm of “natural” rather than “artificial” reproduction because they were preparing the women’s bodies to be co-creators with God. Although the Catholic Church reinforced medicalized understandings of infertility through emphasizing the body as the site of moral procreation, it also provided cultural resources—such as valuing adoption—for women to eventually overcome a strictly biomedical understanding of infertility. However, almost all the women criticized the Church for its lack of support for those experiencing infertility—including the Church’s not promoting NaPro—and for further stigmatizing infertility by not acknowledging it.

Catholic women’s views on how life should be created included strong critiques of the IVF industry and its growth as being symptomatic of broader problems in US society. While there is little overlap between feminism and Catholic doctrine concerning reproduction, the women’s critiques of ARTs echoed early feminist critiques of ARTs that viewed them as instruments of patriarchal control, taking advantage of vulnerable women and their bodies (Arditti et al. 1984; Rothman 2000). Although the women in this study did not invoke the language of patriarchy, they viewed fertility doctors as taking advantage of women in pursuit of profits.

Audrey, a forty-year-old woman who had tried to conceive for over ten years, is one of the few women who, despite being unable to have a child, do not view themselves as

experiencing infertility. She thinks that when the time is right, God will provide her with a child or that it was not meant to be. Yet she explains that the IVF industry's interest in profits and the demand for their services means they do not have an incentive to research the medical causes of infertility:

It's frustrating because I think science is looking at it as, "Here's this technology, and here's the success rate we have with it. And it costs a lot of money, but all these people are willing to spend it." So now they have a commodity. What's their incentive to investigate and to fix what's wrong with you so that you can have a child without all of these scientific interventions? What's their incentive? They're making money off the IVF.

Barbara, who had tried to conceive for two years and became pregnant through fertility medications, also critiqued the fertility industry for commodifying the creation of life and for those who use the services with the view that having a child is a right: "Children are a gift. They're not necessarily a commodity that I can throw enough money at and get now."

Carmela, a thirty-three-year-old woman who suffers from secondary infertility³⁸ and was pursuing adoption, describes the American ideology that one can "have it all" and elaborates on the competing roles—career and motherhood—that women continue to struggle to balance in their attempts to achieve these competing cultural ideals in a society without adequate social support, such as adequate parental leave and affordable childcare:

It's hard because society tells us we can have it all. We can have our career, we can have all this, but our biology is different. God didn't create us that way. There really is a finite amount of time in which women can have children naturally. I think that it's unnatural to go and freeze your eggs. I think we have to prioritize as a society, know what it is that's best and it's hard. I have a professional career and that made me put off having children. It's not like I haven't thought about that because I did go back to school and all that while I was married.

³⁸ Secondary infertility is the onset of infertility after successfully having biological children without fertility issues.

For Carmela, society's failure to prioritize women's need to pursue motherhood at an earlier age contributes to the use of technologies she views as immoral.

Kayla, who had tried to conceive for four years, had a broader cultural critique about instant gratification that extended from IVF to the use of contraception: "Our culture is so everyone has everything when they want it, on demand, and I think the big reason why everybody was into contraceptives is that I can just do it whenever I want with whoever I want." While many women said they empathized with couples who chose IVF, they critiqued a broader individualistic approach rooted in selfishness. Anna felt that ARTs like IVF and preimplantation genetic diagnosis³⁹ (PGD) testing are indicative of society's moral decline:

The whole thing, starting from 1970—whenever it was that the first IVF was performed and succeeded—the whole thing is a very slippery slope, and I don't think it's the last step. It's really scary how far it's come to the point where we're engineering the baby of our dreams. It's really sci-fi, and not in a good way....It's one more step that our society is taking into the dump.

Elaine's view, which aligned with the Church's, represented one of the most extreme critiques in equating the freezing of embryos created through IVF with a holocaust, a comparison often made by anti-abortion activists as well, who view aborted fetuses and embryos as victims of a "silent holocaust." Elaine explained:

In the eyes of the Church, they are human beings. In the eyes of the Church what is happening with IVF is a holocaust. Because all of these embryos are frozen they're in a state of nothing, and they are actually persons in the very early stage of development... We are creating a holocaust and it's one of the biggest ones and it's unseen. Each clinic has thousands of embryos frozen, and I think once an embryo is frozen, unless it's put back in the mother you cannot do much else. Because if you give it to another woman, actually you are creating a cycle in which it is acceptable to get embryos from someone else and actually you are

³⁹ Preimplantation genetic diagnosis (PGD) is the genetic testing of embryos created through IVF before they are transferred back to the woman's uterus. The testing allows patients to determine whether or not they want to transfer embryos that test positive for genetic conditions. The technology also allows for sex selection, but not all clinics perform this service due to ethical concerns.

doing surrogacy. So my view on this is, sadly, the only way out is for those embryos to be put into the woman, but it doesn't solve the issue. Solving the issue is actually finding a true cure for infertility, or promoting adoption.

For Catholics in this study, the meaning attributed to ARTs are not that of nature's "helping hand," as prior research on samples drawn from fertility clinics in Western contexts has found (Franklin 2002). Rather, ARTs are viewed as immoral technologies that prioritize scientific manipulation of the process of creating life. The women view moral reproduction as restricted to marital intercourse, where spouse and God are co-creators, and position themselves in opposition to these technologies. In a national context in which such technologies are largely accepted and embraced, their refusal signifies the depth of their Catholic identity and their role in preserving their views of a natural social order. The boundaries they draw between the artificial and the natural delimit nature as a specific kind of collaboration between humans, technology, and God that allows for technological manipulation of the body to encourage fertility. Technological interventions are focused on preparing the women's bodies for procreation through intercourse, through which they view God as the supreme creator of life.

Evangelical co-creators

While Catholic women viewed ARTs as artificial and immoral technologies that supplanted the role of God, as commoditized reproduction, and as symptomatic of a self-interested society that prioritized individual desires, evangelical women in this study, despite their similar devotion to the sanctity of the embryo and opposition to abortion, did not view ARTs as an artificial imposition on nature. For them, God determined if ARTs would or would not result in a child. ARTs were viewed as instruments of God in that he endowed scientists with the ability to create such technologies, which were not viewed as being in opposition to nature or God but as another element in the cooperative co-creation of life between God, humans, and technology.

But there were limits to those relations of creation for evangelicals. Genetic testing, donor sperm and eggs, and, to a lesser extent, surrogacy were viewed as morally problematic. Evangelicals viewed other ARTs, such as IVF, as technologies in service of creating life and families and thus as moral. For some, use of these technologies created dilemmas around issues of extra embryos and embryo loss, through disposal, not surviving the thawing process, and not developing to viable embryos.

Unlike the Catholic women in this study who adhered to Catholic doctrine regarding reproduction, evangelical women were largely without a centralized religious authority that provided guidelines on the use of ARTs. Given the Protestant tradition of eschewing institutional religious authorities as mediators in accessing God, women in this study largely relied on their personal relationship with God for guidance. They described this relationship as intimate and personal, in which God acted as a benevolent father or best friend, providing women with signs about whether and how to use ARTs. Some spoke with a pastor who suggested that they rely on God to tell them what they should do and who at times reminded them to be cautious in handling embryos. Women also looked for guidance through listening to conservative Christian radio shows, such as *Focus on the Family* and *Family Talk with Dr. James Dobson*.

The evangelical and Catholic women were largely in agreement in opposing the creation of life through the use of egg and sperm donors, which was often viewed as akin to adultery and creating an inequitable genetic connection to their child. But the similarities between evangelical and Catholic women's views of ARTs largely diverged when considering technologies like IVF, intrauterine insemination (IUI), and embryo adoption. While a few evangelical women were opposed to using these technologies for moral and ethical reasons surrounding the sanctity of the embryo, evangelical women overwhelmingly supported these as acceptable means to create

families, with more than half of evangelical women in this study using them. The use of the technology was intended for creating families, so those who used them understood themselves as embracing motherhood and using technologies in the service of creating life, even when embryo loss occurred.

Evangelical women thus viewed these technologies as tools of family building, some citing that ARTs developed out of the knowledge God provided scientists. In contrast to Catholic women, evangelical women invoked the importance of personal choice in that each person determines what is morally acceptable to her or him. As Stacey, a thirty-year-old woman who had been trying to conceive for three years and is pursuing IUIs and IVF, described:

For my husband and I, we decided to make our own choice. With IVF, you can be playing God, but not really because it's like the same with vaccinations. God made men that made modern medicine. And I vaccinate my child, so it's a happy medium. (

Neither IVF nor IUI were options for Claire, a thirty-eight-year-old who counseled with her pastor before pursuing treatments. After a change in her insurance provided her with coverage for fertility treatments, she pursued both IUI and IVF, though she was intent on not disposing of any embryos. During one cycle of IVF, she risked a pregnancy with multiples when she transferred five embryos at once to avoid discarding any. Claire also viewed IVF as a technological development facilitated through God:

I've always felt like even with an aspirin, God has allowed us medicine to treat ailments. He has blessed people with coming up with these things. I know a lot of the scientists would never say that God had anything to do with what they're coming up with, but I know that the Lord's hand is at work in different things, and we felt very adamant that the Lord was telling us to try it [IVF]...I do feel like the Lord has allowed these things to be made.

For Claire and many of the other women who said that God communicated signs for them

to pursue ARTs, technology was not an imposition on a natural process or a threat to God's role in the creation of life. Rather, they saw God as encouraging them to use the technology as a means to create families. Many explained that God determined whether those families would form through ARTs or other means.

Stephanie, a thirty-eight-year-old woman who underwent IUI and IVF, viewed the development of ARTs through scientific knowledge as God improving the condition of women stigmatized and suffering from infertility:

God put people on this earth to invent things to make this easier for people. You know, being single with no children carries such a stigma that a hundred years ago, you were an outcast if you were an old maid. Men divorced their women because they never gave them children. Those were all horrible, horrible things for women and just fed into the, you know, women are less valuable than men argument, and I just don't think it's right.

While most evangelical women embraced ARTs as a means to form their families and achieve parenthood, there were also limits to their support of these technologies. Paula, who had tried to conceive for eight years and eventually adopted and later had biological children without ARTs, explained that God made her a better person through her lengthy struggle with infertility. She counsels women in the hope that they will not have an abortion, which she had as a young woman and deeply regrets, initially feeling that infertility was God's way of punishing her. Paula explains that while she approves of IVF, there are limits to its use when it fully impinges on their view of God's role in creating life:

I'm okay with the IVF in terms of creating a life and transferring that life into the mother's womb. I'm on the fence about the genetic diagnosing before the transfer to the woman...I don't want to select the gender. It's like Christmas when you're waiting for a gift, I don't want to know what it is. I want God to pick that out...The technology might be good to have for some occasions, but then you know, are we talking—some people can take it too far.

Abbey, whose father is a pastor, echoes Paula's concerns about selecting embryos with particular traits such as their sex, and believes that details about personal characteristics are to be determined by God rather than humans:

Even with IVF, God is still God. He's still going to ultimately have the power over whether that embryo is going to survive or not....He still ultimately has that power. But when it comes to being selective and picking and choosing things—these type of treatments are for infertility. It's not for picking the sex of your child, picking the number of your children. It's about motherhood. It's about parenthood. It's about life. So when we start getting too picky, then I do have a problem with it.

Technologies that create families are acceptable for Abbey, but God should be determining the details of what that family will look like.

There were moments in the course of treatment, such as the fertilization of the egg or whether the embryo would grow and implant, where God's "guiding hand," as one woman put it, is viewed as especially important in the IVF process. Diana, who tried to conceive for three years but could not afford IVF, explained that whether the treatment worked or not was ultimately up to God: "God gave us this great medical advancement, and it's up to him if he allows it to work for some people and not work for others. In the end, it's him choosing if it's going to work or not." In contrast to the Catholic women, God is viewed as key in developing the technology and determining the outcomes. For both Catholics and evangelicals, God ultimately determines whether life will be created. But for Catholic women, God should be a co-creator within the bounds of intercourse. For evangelical women, God can also be a co-creator during technologically assisted reproduction.

Catholic women and many evangelical women opposed human embryonic research because they viewed the embryo as a person; evangelical women also viewed technology's role

in creating these embryos as being for the purpose of making parents, children, and families. However, some evangelical women viewed donating an embryo to research as a potential option because the embryo could have an important purpose in potentially helping others who are suffering. However, those who had created embryos and had children from them were less likely to consider donation to research or to other couples as options.

Lisa, a thirty-three-year-old woman who had been trying to conceive for four years and had a successful cycle of IVF that resulted in her son and four frozen embryos, explains that she cannot discard or donate them:

My mom tried to convince us to donate to science if we didn't use them, because she believes they're a cluster of cells and that there's testing that can be done to save lives in the future. But I cannot get over the thought that this is a being with a soul that would be tested on and have no choice about it.

Paula similarly explains her ethical and moral objections to donating the embryos to research:

I don't want them used for research because I wouldn't know what they were doing with them. Would they grow them into partial human beings and then conduct horrible experiments on them? People and institutions can say, "We would never do that," but the reality is, there are scientists and there are people doing things that we don't know about. . . . My mother's intuition says let them grow to life, and if you can't bring them to life, then let them unthaw, but not to let scientists play with them. I'd rather see them not unthaw, but I guess to spare them from any kind of, you know, human—I don't want to say torture—I couldn't see labs growing my babies and then doing stuff with them. That just horrifies me.

But for Paula, thawing and discarding frozen embryos is preferable to research, during which unethical experimentation might occur. In contrast, some felt that research would provide a greater purpose for the embryo that would never be realized if the embryo was created and then discarded. Tina, who tried to conceive for over ten years, underwent IUI but was unable to afford

IVF. She said that had she done IVF, research would be an acceptable option because the embryo's purpose would be for the greater good: "It could possibly help other people in the future, so that's why I would be okay with it." Those who had actually undergone IVF were less inclined to donate embryos. Only a few women in the study had extra embryos from their treatments. One transferred them to her body. The other two were conflicted about donating them to another couple, and neither was willing to discard or donate them for research.

For evangelicals in this study, the meaning attributed to ARTs is of "nature's helping hand" in that it is assisting reproduction (Franklin 2002). But in comparison to secular accounts of assisted reproduction where God is largely absent, evangelical women described God's role in developing ARTs and determining their treatment outcomes. Using ARTs was not disrupting nature but another way for family formation to happen where God, humans, and technology are co-creators. While there were limits to the women's use of these technologies in conditions under which man is understood as encroaching on God's role in the creation of life, for evangelical women, ARTs and God have a collaborative relationship in the creation of life. In contrast to Catholic women, evangelical women do not position themselves in opposition to these technologies. Though women described experiencing turmoil at some points in the process, they largely embraced these technologies in their pursuit of parenthood.

Status of the Embryo

Evangelical and Catholic women's distinct understandings of ARTs' role in how life should be created—as a collaborative co-creator within the bounds of nature or as a technology that disrupts the natural order—all differently shaped the status of the embryo in the women's encounters with these technologies. Were embryos entities that should be protected from the technology under all circumstances, or was the technological goal of providing an opportunity

for embryos to become part of families of greatest importance? Even for those who viewed the technologies in positive terms, the loss of embryos through disposal or donation can create dilemmas, and these issues can be particularly salient for those who believe an embryo to be a person at the very beginnings of life.

Evangelical women: the embryo's status as context dependent

For evangelical women who ascribe personhood to the embryo and view the technologies as a moral mode of creating life in cooperation with God, the status of the embryo in their narratives was contingent on factors like the intentions behind their creation, the space where the embryos are brought into and out of existence, and the attachments that women formed with the embryos. At times, evangelical women who engaged with these technologies had no conflict about the inevitable embryo loss that occurs in fertility clinics, a common occurrence due to the nature of the technology. Given the financial, physical, and emotional toll of IVF treatments (A. L. Greil et al. 2010a) and the relatively low success rates, patients typically seek to create as many embryos as they can per cycle. Only a limited number of viable embryos are transferred to the woman's body at a time. The additional embryos are discarded if the doctor deems them not to have developed adequately; embryos can also be frozen or donated for research or to other patients. These issues around embryo loss and ARTs are one reason that the Catholic women were critical of and rejected the technology. But many evangelical women did not consider embryo loss that occurred in the context of using ARTs problematic, particularly those who had not yet used the technology in their treatment, had not experienced embryo loss, or had not been confronted with decisions about extra embryos.

One reason that embryo loss was permissible for many evangelical women was that loss was viewed as being within the bounds of nature, given that even in unassisted reproduction, not

all embryos that are conceived in the woman's body survive. Women described a similar process that was occurring outside the body when embryos are created during IVF. Since most evangelical women did not view these technologies as an artificial intrusion on natural processes but rather as technologically assisted extension of them, they equated embryo loss outside the body with embryo loss inside the body, drawing on scientific frameworks to make the parallel comparison. Sarah, a thirty-year-old homemaker who had undergone four cycles of IVF and had miscarriages and frozen embryos that did not survive thawing, explains:

It's no different than a woman that does ovulate and the sperm just doesn't penetrate, and it [the embryo] doesn't make it either, or if it does make an embryo, a lot of women do miscarry and never even know it because it's so early. So I don't really look at it any different. It's just that the body is not doing it. The doctor is doing it. But in the end, God is the ruler over all of it, and he's the one that decides whether they make it or not. Like we had some [frozen] embryos, but when they brought them out of freezing, not all of them made it. So to me, those were just the weak ones or ones that would have had an abnormality or wouldn't have been healthy... If I'd be able to have kids naturally, God would have been doing the same thing inside my body as he was outside for IVF... He has just as much say over those [embryos in fertility clinics] as he does over those that happen naturally.

For Sarah, embryo loss during IVF is consistent with natural processes because both within and outside of the body, not all potential embryos are created and not all created embryos result in pregnancy. Like Sarah, many described God as determining if the embryos would live or not. Barbara, a thirty-year-old who works in health care and has undergone four cycles of IVF, lost thirteen embryos that did not successfully implant or did not survive the thawing process. But she struggled with freezing the embryos because she worried it would harm them. In the end, she did freeze them and viewed the losses that occurred during thawing as similar to that which occurs in the body:

There's things that happen naturally on their own, and for those eggs that did fertilize for me, that's kind of my viewpoint is that if I released it [the egg] on its

own in my body, and my husband's sperm fertilized it inside my uterus, the result would have been the same. That embryo wouldn't have continued to develop because you only have a one-in-twenty shot every month....I think it would have happened the same for me with those eggs if it would have been through in vitro or through just the natural course of things.

Sarah and Barbara draw on scientific frameworks for knowledge of the success rates of conception to explain loss in both technologically assisted reproduction and "natural" reproduction. Some, like Piper, who has some reservations about IVF due to potential embryo loss, drew on pregnancy statistics to alleviate their concerns: "Fifty percent of all pregnancies end in miscarriage before they even show positive on a pregnancy test. I guess that's my convenient rational for saying that it's ok to create embryos to implant."

Women often invoked God's will to describe the fate of embryos in fertility clinics. Diane, a nondenominational Christian who had been trying to conceive for three years, said that she would do IVF as much as she could if she had the financial means. When she consulted with her pastor about treatments, he told her she would feel compelled to do whatever God wants:

They [her pastor and his wife] don't think that there's anything that goes against God's will, because in the end, no matter if you do the IVF, it's going to be God deciding if it's going to work or not. So they were really open, and they gave suggestions of their own family members that went through IVF and were really supportive.

Since evangelical women largely viewed these technologies in positive terms because they assist in family building and understood God as a collaborative co-creator in the technology's development and treatment outcomes, they were in less turmoil than Catholic women regarding the fate of the embryo, even when they were aware of the possibility of embryo loss. However, they were also in less turmoil because most postponed dealing with questions of what would happen to embryos until they reached that point of being confronted with those questions in their treatment trajectory. For most evangelicals, their immediate concern

was having children, not contemplating the moral and ethical dimensions of the technologies before using them.

While evangelical women invoked scientific and religious explanations for drawing parallels between embryo loss in the body and in the clinic, technologies in the clinic that allow one to be made aware of embryo formation at the earliest stages contributed to conflicts surrounding embryo loss in IVF. Most of the women considered embryos to be not just people but their children from the point of fertilization, which resulted in forming attachments to embryos early on in the process. In the evangelical women's narratives, the embryo's status as a person, child, or human life was at times ambiguous and contingent on the context.

Lee, a thirty-one-year-old teacher who had been trying to conceive for three years, was one of the few women who had ethical issues with IVF prior to pursuing treatment. She had concerns about embryos being destroyed and had chosen her doctor by visiting a website with a directory of pro-life doctors. Because her husband suffered from infertility issues and they were opposed to donor sperm, which they viewed as adulterous, they pursued embryo adoption, which they heard about while listening to *Focus on the Family*. Not all the adopted embryos survived thawing, and not all that were transferred to her body implanted. While she thinks of embryos as people and her children, she explains the emotional difficulties attaching as strongly to entities that do not look or feel like her children:

We had a total of eight embryos when we started, and four of them didn't survive the thaw. Two were transferred and didn't implant. So we lost four through that....I had to reconsider my convictions about these things, because it's weird when you start talking about them because I don't want to talk about them like they are things. They're kids, but they don't have faces yet. They don't have a name. You know? The best I could say it is it's just weird sometimes (laughs). Like because so many people don't even know those things or think about so much of that when they're just getting pregnant, you know, naturally. It's hard

and a little more difficult—a lot more difficult to emotionally attach to them as children. I believe that they are children, but it's hard not to think of them differently than a child who has been born, just because you can get to know a child who has been born. So emotionally I'm a lot more detached from them. In some ways it's a blessing, because it was hard to lose them, but I don't think it's—I don't think it's as hard as people who go through like a regular miscarriage....I struggled with that. It just kind of stretches your brain when you're thinking about it.

For Lee and many other women, viewing the embryos as people and their children does not mean they feel attached to them in the same way as they would if the embryo was implanted or resulted in a successful pregnancy. Unsurprisingly, their attachments grow stronger as the embryo develops, particularly in their bodies. Nonetheless, they understand the embryo as a person outside their body as well. While they view the ex vivo embryo as life, a person, their child, they sometimes experience the embryo as an entity in a way that is qualitatively different from how they typically think of a child or a person, a concept that itself is challenged by their encounters with technology.

The purpose and intent for creating embryos and the context of their creation and loss also shaped the status of the embryo loss as morally reprehensible or permissible. Many of the evangelical women were adamantly opposed to abortion⁴⁰ because of their view that embryos should be protected as life. However, embryo loss in fertility clinics was viewed as much less problematic because the fertility clinic, its technologies, and its patients were viewed as embracing motherhood and family building. The context of using technology to create embryos in spaces for family building gives their loss different meaning. For example, Piper draws a distinction between creating embryos for the purpose of research as opposed to family building:

I am against creating embryos just to harvest stem cells. I am completely, one hundred percent, against that. Creating embryos for the purpose of giving life I

⁴⁰ Though none stated they thought abortion should be illegal.

am okay with, but I feel like that should be done in a conservative way....Are [all of the embryos created] going to be used for the purposes of creating a child? In reality, what happens is somebody goes through several IVF cycles, they eventually get their child, and then there's all these left over eggs [embryos] that end up getting donated to research or are disposed of. So they're creating life with the intent of never letting that life grow.

Not all women advocated for a conservative approach in limiting the number of embryos created.

But the purpose of their creation and the patient and doctor's intent were critical in defining morally acceptable use of these technologies, even when the boundaries were not always clear in practice.

For evangelical women, the status of the embryo was thus contingent on the context of its creation and loss. Given that embryos were being created with technologies understood as having been developed by God and the outcomes determined by him, embryo loss was typically framed as comparable to processes of "natural" reproduction, from which not all embryos result in successful pregnancies. The intent and purpose of the technology and an embryo's creation and loss played a critical role in evangelical women's understanding of the embryo, embryo loss, and the women's acceptance of ARTs.

Catholic women: the embryo's status as absolute

In contrast to the evangelical women, for Catholic women who ascribe personhood to the embryo and view the technologies as an immoral mode of creating life, the status of the embryo in their narratives was absolute in that the use of the technologies was morally unacceptable regardless of intent or context. Since these women did not use IVF, they were not confronted with the same complexities of using the technologies or with questions surrounding the embryo. The women's refusal to use the technologies was an expression of protection toward (potential) embryos. Despite their profound desire for biological parenthood and having financial access to

such technologies, they did not think the context of the fertility clinic and the use of such technologies was how life should be created. Their refusal was an enactment of their religious and gendered identity as moral guardians, for whom the embryo was to be protected and life was to be created in a particular way. As Elaine explains in the narrative about her depression when hearing how women talked about their frozen embryos at an infertility support group:

One night I went into an infertility group here, and I was terrified, terrified of what I was hearing there. Their experiences, how they were treated by the IVF clinics. They called their embryos “my little Eskimos”—“I’m going to pick up my nine Eskimos at the clinic”.... I was struck by it and I sank deeper into this dark night of the soul.

While the women at the infertility support group may have believed the frozen embryos were also their children and in the moral sanctity of the embryo, Elaine was deeply troubled by their willingness to pursue IVF and freeze embryos and framed her refusal of IVF as her promoting life by not destroying embryos.

While the evangelical women also defined embryos as human beings, they viewed their use of the technology as being in the service of creating life rather than destroying it. As Audrey, who is in her forties and has been trying to conceive for over a decade but does not consider herself infertile because God might still give her a child, succinctly put it, “They are creating this life and what are they doing with those embryos? They’re creating it to destroy it.” Tracy, a twenty-six-year-old teacher, was pregnant during the interview after having tried to conceive for two years. She attributes her ability to conceive to a change to a more healthy diet. Tracy echoes Audrey’s concerns about embryos and technology use:

I believe life begins at conception, and I think IVF is playing God. I mean, people are creating life in a Petri dish and then transferring it to a human. Then, what do you do with all those other embryos that they freeze? Yes, an infertile couple has a baby at the end sometimes, but at what cost?...It’s just sad....What if their child

that they conceived in a Petri dish is just thrown away?

Evangelical women and Catholic women understand IVF-related embryo loss differently.

Rose, who was thirty-six-years-old and tried to conceive for over five years and eventually adopted, also invokes miscarriages but as a way that loss occurs that is distinct and more acceptable than embryo loss before implantation:

I didn't want to pursue IVF because I believe that life begins at conception. I felt like there are too many embryos that don't make it. I understand when you're getting pregnant and miscarrying, which in my mind is more natural. In IVF, you're creating those lives [embryos] that a lot of the time very few of them are actually going to be born. That's where my problem is with in vitro fertilization.

For Rose, part of the distinction between embryo loss from miscarriage and embryo loss in a fertility clinic is that in a fertility clinic, patients are aware that not all embryos that they create will survive. One might say that taking a conservative approach in limiting the number of embryos that are created could provide a solution, but Catholic women largely dismissed this strategy as unacceptable. Joan, a thirty-three-year-old who had suffered multiple miscarriages and converted from Protestantism to Catholicism partly because the Catholic Church provided clear guidelines about ARTs, explained that even a conservative approach to technology was not permissible:

I understand wanting to do that. But I still don't think it's the right answer. You're still making it so much more likely that those babies don't make it. You're still not creating life in the way it was designed to be created.

Some of the women considered embryo adoption because the embryos were already created, and like evangelical women, they viewed adoption as a way to rescue embryos that might otherwise be frozen indefinitely or discarded. The Catholic Church is still opposed to embryo adoption because they view it as supporting an immoral industry. Anna considered embryo adoption until she consulted theologians about it:

I don't think we should be in a position where we have to think about, "Now, what do we do with all these extra embryos?" If IVF was not an option and if people did not pursue it, we wouldn't have this moral dilemma on our hands. Going back to what I said earlier, the fundamental teaching of the Catholic Church is the preciousness and the gift of life, and preserving that at all cost...there was one time when I thought, "Oh, isn't embryo adoption a beautiful option? You give these embryos a chance at life when they would otherwise be sitting in these freezers."...This was actually one of the only teachings of the Church that didn't automatically click for me, like, "Why wouldn't that be okay?" But then I started talking to theologians on the matter, scientific theologians, no less. And they really brought to light why that's an issue. It kind of goes to the same idea of surrogacy, that every human life deserves to be conceived out of an act of love between their mother and father. And if you're carrying this child in your womb that really is not of your body and your husband's body, it's a form of surrogacy. And as beautiful as the desire is to give those embryos life, that's not how it should be played out.

Despite their strong desire for a biological child, Catholic women were not looking for a way to circumvent religious restrictions on the use of ARTs. In fact, they thought the Church's teachings on ARTs were not taught widely enough. Kathy, a stay-at-home mom who adopted and later had a biological child after trying to conceive for over five years, explains that she wishes the Catholic Church's position on IVF was more widely taught in local churches, which would discourage the use of technologies she views as immoral and provide alternatives that were in line with the Church's position on reproduction:

I think that everybody has to know about the teachings. I don't think anybody knows....Everybody knows the Church teachings on pro-life or abortions. I think the teachings on IVF need to be just as widespread because I've known a lot of Catholics who have done IVF. I've heard a lot of stories where people say, well, a priest told them they could. I hate to say it, but that even happened to me. I just think that until we all know what's wrong, I think that's what has to be focused on. Just more getting that down to the people on the ground, the priests and the people in the pew knowing the teachings.

As these women's accounts illustrate, in comparison to the evangelical women's narratives in which the embryo was more contextual and contingent on factors like intent and the circumstances of embryo creation and loss, Catholic women had more of an absolutist position

regarding the status of the embryo and these technologies. While intimately aware of the suffering from infertility and often sympathetic to those trying to have children even when they deeply disagree with their treatment decisions, Catholic women viewed these technologies as fundamentally immoral because of how embryos are created, stored, and disposed of, regardless of context or intent in creating them. Catholic women's refusal to use the technologies was both a rejection of a mode of reproduction that they viewed as immoral and, by not creating life under those conditions, an act of protecting sacred life and a particular natural order of reproduction.

In both evangelical and Catholic women's narratives about these technologies and the status of the embryo, we see how the women's different understandings of reproductive technologies are mediated by religious understandings of nature, technology, life, and life's creation. The meanings attributed to these technologies as moral or immoral and women's engagement with them by using or refusing to use them also shape their understanding of themselves as particular kinds of Christian women, for whom engagement with or refusal of the same technology can be an indication of one's devotion to—and conception of—God. For evangelical women, it is a God who assisted in developing these technologies and provided signs for women to engage with them. For Catholic women, it is a God whose divine role in creating life is being supplanted by such technologies.

Beyond ARTs: Transitioning from medical treatments to traditional adoption

When medical technologies failed—or in rare cases were avoided altogether—the evangelical and Catholic women's accounts of pursuing non-biological family formations were more similar than different. For both groups of women, it often took some time to realize that God's role in forming their families was not limited to having a biological child. This was particularly true for Catholic women. Evangelical women described a stronger tradition of their local religious

communities being vocal about valuing adoption. Many described growing up doing missionary work where they often spent time working with orphans. These experiences instilled a strong desire to adopt from an earlier age, which they sometimes reflected on as God “planting the seeds” for envisioning their family with adopted children. There were similarities in dominant family forms for both groups as well. While evangelicals were more open to adoption earlier on in their lives, both groups, at least initially, privileged having biological ties to their children and nuclear family forms.

Catholic women’s accounts of adoption

While the Catholic Church values and is open to adoption, the women’s accounts indicated that adoption was spoken about infrequently in their religious communities, which likely contributed to what appeared to be a more difficult transition from pursuing biological parenthood to traditional adoption. There was a culturally Catholic expectation of biological motherhood, compounding the US culture’s privileging of biological kinship (Becker 2000; Greil 1991; Sandelowski 1993; Thompson 2005). As Georgia, who adopted, succinctly put it, “I am a mother, but I am still infertile....getting pregnant, having a biological child that looks like you, all of those things [desires] are still there for me.” Kathy, a thirty-three-year-old Catholic woman who tried to conceive for over five years, used NaPro treatments and eventually adopted a child after raising funds on her infertility blog and receiving contributions from family members.

Kathy described her difficulty transitioning from desiring a biological child to adoption:

You felt like you were trying to force something that wasn’t happening. I was praying so much for God to give me peace, and maybe that was part of that prayer being answered, that he was giving me the grace to change my prayers to just want to be a mother....Because I think you cling to the biological thing, at least I did, for a certain number of years, and then it’s, “OK, what more can I do?”...Eventually, I just realized that I wanted to be a mother, more than anything. I wanted God to grow our family however he willed that to be. I

remember where I was when that clicked, and it was a big turning point in my journey, because my prayers changed from, “God, I want to be pregnant” to “God please grow my family however you will.”

Kathy was not alone in clinging to the hopes of having a biological child. Marilyn, a Catholic woman who tried to conceive for four years and eventually adopted, viewed her infertility as part of God’s plan for building her family through adoption, though she still grieves losing the experience of pregnancy:

Then when we decided that maybe we’re infertile because there are children that God wants us to adopt, and that we would never have come to that decision if we had had our own children...But I still grieve that I didn’t have the experience of pregnancy....I was telling a friend of mine who’s in the process of adopting and she said, “Well, at least the good thing about adoption is you don’t get postpartum depression...” and I said, “Well, actually, you do,” because you’re grieving in a way.”

Like Marilyn, many women in both groups described the experience of pregnancy as being important to them. A genetic connection was said to be more important for their husbands, and many women described the strong desire to pass on one’s DNA as “a guy thing.”

Georgia, who also had difficulty transitioning from her focus on biological parenthood, went on a pilgrimage to France to visit what is considered to be a source of healing holy water in an attempt to cure her infertility. Georgia interpreted the adoption of her son soon after her visit as the miracle:

While we were dealing with this for about four years, my husband said, “All right, let’s go to Lourdes.” There is this water that is flowing. It’s considered miraculous water. We drank it, and we bathed in it, and we did all these things. We ended up going to Rome afterwards also....We spent Easter with the Pope, and did mass. It was an amazing journey of faith. Then three weeks later is when we got the call to adopt our son...[That is] part of how my faith continues to work in my life. I’m not going to say that I wouldn’t have my son if we didn’t go, but I do think that he is a miracle. We prayed and prayed for many years, not just this trip. But to me, it was evidence of God working in our life, that it was so quickly after this trip.

Elaine, who was in the final stages of the adoption process during the interview, described the significance of signs from God—particularly a meaningful calendar date—as an indication that he was at work in building her family through adoption. Elaine’s grandmother was a devout Catholic who felt a strong connection to St. Anthony. Her grandmother died while in a coma on the feast day of St. Anthony, which was also her wedding anniversary. The family viewed this as a sign that the grandmother went straight to heaven. Several years later, the grandfather died on the same day, adding even greater significance to the date for the family. When Elaine was going through the adoption process, the date’s significance resurfaced:

Since we started the adoption journey all kinds of strange signs have happened. And in my faith I say they are little hugs and kisses from God saying this is the path...during this adoption journey on the 13th of June, which is the [anniversary of the] day my grandmother died....I had been praying to Saint Anthony for a sign and praying and...on the 12th I received a call that they’re moving the adoption decision day to the 15th. I was very mad because I had been praying a novena to Saint Anthony. On the 13th I went to mass very early for my grandmother. I was sitting at the confession line because I was a little bit mad at God and praying to him when I notice that right in front of me on the 13th of June—was the head of our adoption agency. The same woman who would make [the adoption decision]....This is in a city of millions of people....She was sitting right in front of me in the confession line, and I had been praying to Saint Anthony for a sign. It was the most amazing experience. So all throughout our adoption journey, we have gotten all of these signs, and it has give us great peace.

The significance of this date for Elaine is that it not only connects a divine figure to members of her family, marking important familial moments such as a marital union, death, and passage to an afterlife, but also provided a sign to Elaine that she should be building their family through adoption.

Catholic women often struggled with transitioning from pursuing biological parenthood to adoption, some continuing to try for a biological child after adoption. In order to achieve biological motherhood, the women were persistent in using technologies and medicine that the

Church did not object to. But eventually they were able to draw on Church doctrine to realize the value in other forms of parenting, such as adoption, and other ways women can be valued beyond biological motherhood. As Elaine explains:

The other very helpful part about my Church and my religion is that...the Catholic Church is a promoter of adoption...So there are many ways to parent and as Catholics we need to embrace these people that are alone, that do not have children, and embrace them in a way that they feel part of the larger church. And so they're not feeling so alone that they do something that they will regret [e.g., IVF].

Marilyn, who adopted, came to realize that fertility is not limited to biological definitions alone, but she still mourns losing the experience of pregnancy:

You start bonding with this child, but then you're sad that you weren't actually pregnant with them. You're sad for their birth mother. You realize that this child has come into your arms only because somebody else had to let him go. It's difficult...the grief of not being able to get pregnant is still there even though you might have adopted children or you maybe you don't even adopt. Maybe you're fertile in other ways, doing something else, but that grief never goes away.

Elaine elaborates more on the notion of broadening one's understanding of fertility.

Elaine understands protecting and "giving life to others" through efforts to decrease the use of IVF and promote alternatives as an example of another form of fertility. Elaine ended up working with the founder of NaPro to bring it to her local city, where there were no NaPro practitioners:

You can be infertile in terms of not having a baby, but you are fertile in the sense that you can give your life to others...That's why I chose to try to bring NaPro technology to my city. I have a ministry helping infertile women. I am trying to make something out of the pain by giving myself in service to others.

In women's accounts, culturally Catholic expectations of biological motherhood exacerbated the stigma of infertility. Religious prohibitions against the use of ARTs limited treatment options. But Catholic women were eventually able to draw on the Catholic Church's

acceptance of adoption to define fertility in other ways that transcend the biological, though most grieved the loss of biological motherhood, particularly the experience of pregnancy.

Evangelical women's accounts of adoption

While evangelical women also valued and longed for the experience of pregnancy and biological motherhood, they described their earlier life experiences in their religious communities as communicating to them that adoption is a valuable way to form families. As adults experiencing infertility, they often reflected on God purposefully planting a desire for adoption in them early on in life. For example, Jill, who adopted her daughter from China, explained that in the 1990s she watched a documentary, *The Dying Room*, about Chinese orphans and the treatment of female babies, that resulted in her desire to adopt:

I always knew that I would adopt....I truly believe that God put that in my heart at a young age, to care for orphans....In the early 90s there was a TV documentary called *The Dying Room*, about how they would just take these Chinese orphans and just put them in a room to basically just die....I just remember watching that and feeling like I need to do something, and I thought God was telling me, you need to adopt one of these girls and bring them into your home.

Joan described a desire to adopt early on in her life, when she felt she might have difficulty having a biological child. Years later, sometime after experiencing a stillbirth at six months, she felt God was telling her to adopt. When she was able to raise adoption funds through her local community, she felt that was another sign from God telling her to continue on the path to adoption:

When I was a teenager, and I started picturing my life as an adult a bit more, I thought that I would be probably living in Africa and running an orphanage....I remember thinking as well that if I ever had a hard time having a baby that I wouldn't worry about infertility treatments, that I would just adopt right away, and I don't know why I really thought that. I just had some kind of a feeling that maybe that would happen for me. And so I told myself what's the big deal about having your own kid when there's so many who don't even have parents?...It was in September [years later, after her stillbirth] where I just felt in my heart that God

told me to get ready for a baby...I would say it was God really giving me a good nudge and saying to be ready. And I didn't know what I was supposed to be ready for, and so I, of course, counted down the weeks to see if I was pregnant, but I wasn't [laughs]. Then I figured God must be telling me to get ready for adopting, and so that's what we did. And then we adopted nine months later, actually, so that was pretty cool. Our son was conceived like a week or two after God had told me to get ready for a baby.

Joan, like many of the evangelical women who adopted, described God instilling in them a desire to build their families through adoption. However, promoting adoption did not always entail addressing infertility. Nicole, who also adopted, made this point:

They're [the local church] so vocal about supporting adoption, but like other churches, no one really says much about infertility....Like in our church specifically, no one has really said anything about infertility ever. So it's hard for me to know what the Church's stance is on it, but with adoption, they're vocal about supporting orphans, one less orphan, you know? They're vocal about that, but not vocal about infertility.

Although the evangelical women in this study described hearing more about adoption in their local churches than did the Catholic women, references to adoption are typically not in the context of infertility, which both evangelical and Catholic women describe as being largely unspoken of, though there were exceptions for evangelical women.

Evangelical women described God as providing signs to adopt in various ways. For instance, Tara, a thirty-six-year-old woman who experienced secondary infertility, was ready to adopt, but her husband took several years to be ready. When I asked her what changed for him, she explained the ways he eventually viewed God as communicating to him to pursue adoption:

Basically what changed for him was he knew that God was probably speaking to him through me when I kept talking about adoption, but he kind of put it off. But then there would be a song that came on the radio....Or we would go to Chris Tomlin [a Christian musician] concerts. Any Christian concert we would go to, they'd talk about compassion or world vision, and so we ended up sponsoring a child. Then sermons that we're being taught at our church. It wasn't talk about adoption, but that's always what my husband felt God was laying on him, and

then the [Haiti] earthquake happened, and that's when he really said, okay, there's all these kids who need a home, and we have a home.... We could be that child's family, and so that—that's where it really came full circle for him, and he said he was ready to adopt.

For some, treatment failure was also understood as part of God's plan for them to build their family through traditional adoption. Nicole, who underwent multiple IUIs and eventually adopted, explained:

I remember having conversations with a friend about when do we stop [treatments]? This is so ridiculous. Why are we doing this? Because again, God has a plan. At what point do you surrender and just say, alright, show me the way, versus trying to keep going on your own and figuring out what you want. But I think some people, like me, have to go through the process in order to change their image of their family.... Obviously infertility completely changed the image I had of my family.... I can't say that I would have ever gotten to this point had I not gone through what I went through. Yeah, we threw a lot of money away on infertility treatments. Do I wish that we had spent that much? Absolutely not. Would I trade it for the world? No. Because it got us to where we are.... I think, honestly, people are meant to go through infertility and get pregnant [using ARTs], and that's their method to get pregnant. I think that's part of God's plan sometimes, and there's people like me who can't get pregnant no matter what interventions come along, but I don't necessarily know why, but I think that it is part of the plan.

As Nicole's story illustrates, evangelical women's general acceptance of using ARTs in comparison to Catholic women's did not necessarily mean an inability to stop treatments, as often found in secular accounts of experiences with ARTs (Sandelowski 1991). To be sure, some evangelical women did say they would pursue IVF until they could no longer afford it. But treatment failure was also viewed as a sign from God to pursue alternative paths to family building or to stop treatments. For instance, Claire, who could not afford fertility treatments until her employer was bought by a company based in a state that offers insurance coverage for fertility treatments, underwent two rounds of IUIs and two cycles of IVF. Her concern about embryos being discarded resulted in her transferring five at once during one cycle of IVF. Claire

initially viewed the change in insurance coverage as a sign from God for her to pursue treatments. She subsequently viewed ending treatment after repeated failures, and reaching her insurance limit on costly medication coverage (\$15,000), as part of God's same plan. She and her husband prayed and decided that if they were able to raise all of the funds for medication, they would continue treatment. But they fell just shy of the amount needed, which they viewed as God redirecting their path:

We prayed that if the Lord wanted us to do it again, the medicine would be provided[through funds raised by friends and family]... almost all the medicine was provided, but it wasn't all provided, so we still didn't feel it was right for us to do it. We were hoping for a sign that we were supposed to continue treatment. Instead of saying Lord, show us a sign, we said Lord, provide the medicine...He slowly took away the desire to do it again.

Evangelical and Catholic women's accounts of moving to adoption reveal parallels in viewing infertility as part of God's plan for them to form families in nontraditional ways. Both groups of women largely viewed their infertility as a medical condition. But infertility's meanings were not limited to the medical realm. Infertility was also woven into a divine plan according to which God orchestrated infertility as a step toward forming their families through adoption. For some, this meant undergoing treatments—ARTs or other forms of medical treatments—that were meant to be unsuccessful because God had another kind of family envisioned for them. Even through treatment failure and the refusal to use certain technologies, God was part of the women's narratives as having a plan for their family. Evangelical women described God's role in their pathway to adoption as beginning early on in their lives. For Catholic women, the transition to adoption and moving from biological motherhood was a more difficult transition. Both groups had a benevolent understanding of God as not punishing or purposefully making them infertile. They viewed him as a co-creator in forming alternative family trajectories not limited to biological ties.

Discussion

While pro-life Catholic and evangelical women are thought of as having a uniform view on reproductive issues given their opposition to abortion, this study shows that if we look beneath the surface of the prevalent political rhetoric, we see that they think about some reproductive issues in remarkably different ways. This study traces these differences, and how they manifest in the women's understandings of nature, reproductive technology, and their conception of God and themselves as co-creators.

Unlike evangelical women, Catholic women did not "renaturalize" ARTs as nature's "helping hand" in ways consonant with studies of secular women (Becker 2000; Franklin 2002; Greil 1991; Sandelowski 1991, 1993; Thompson 2005). Catholic women viewed these technologies as inherently immoral because they impinged on their view of natural reproduction, where man, woman, and God are co-creators of life through intercourse. Moreover, they regarded ARTs as destructive to the moral fabric of a society they saw as increasingly self-interested and materialistic. For them, the market for IVF represented the commodification of life itself.

Despite their comparable opposition to abortion and obligations towards preserving the sanctity of the embryo, evangelical women viewed these same technologies and God's relationship to them in fundamentally different ways. ARTs were viewed as within the bounds of their conceptions of nature. In this framework, ARTs were technologies of God, who provided scientists with the knowledge to develop and use them, and who ultimately determined whether life would be created or not. The idea of divine forces determining technological outcomes has been observed in the context of the practice of ARTs among Ecuadorian Catholics (Roberts 2012), as well as among Hindu practitioners and patients in India (Bharadwaj 2006).

Perhaps most striking in the comparison between evangelical Protestant and Catholic women, is that in the context of ARTs, the status of the embryo is more ambiguous and context-dependent for the former. For evangelical women, purpose, the context of an embryo's creation, and women's attachments to them played a part in determining whether embryo loss was seen as being within the bounds of nature, and thus permissible. This study challenges the presumption that religion is absent from the practice and meanings attributed to ARTs in the United States. Not only does religion mediate evangelical and Catholic women's experiences with infertility and ARTs, it differently informs their understandings of nature, technology, and God, and how it does so has significant implications for the way we think about religious people's engagements with science and technology.

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CHAPTER 5

Conclusion

Research Aims

In this dissertation I aimed to examine how devout Catholic and evangelical Protestant women experiencing infertility contend with the contemporary dilemmas surrounding advances in reproductive technologies. Specifically, I wanted to understand how interactions between gender, religion, and technology shaped their experiences with infertility. Reproductive technologies are not technical objects limited to the purview of scientists and patients in clinics, but are assemblages of technical devices, processes, and procedures that unfold in particular social, political, and economic contexts. These technologies both shape and are shaped by cultural ideologies about reproduction, parenthood, gender, and technology. For example, the cultural ideal of biological parenthood provided the context for the emergence of the fertility clinic, which further reproduces that cultural ideal. The cultural ideal of technological solutions to problems underscores processes of biomedicalization, which reinforce the authority of medicine.

The capabilities of these technologies are considered by some to be miraculous in that they can facilitate biological reproduction, but they are considered by others to be immoral for the same reason (i.e. scientists supplant God as the creators of life). Technologies are neither inherently miraculous or immoral, it is the contexts of their making, the meanings attributed to them, and the practices undertaken with them that make them so. ARTs developed in a particular socio-historical moment dominated by the "politics of life" in Western contexts. In these

contexts, they pose challenges to existing understandings of "life," which are being redefined, reconfigured, and mobilized in different ways, and, in turn, shape our understandings of these technologies.

Religious authorities have a long history of responding to technological changes by accommodating, integrating, rejecting, and, at times, reinterpreting their teachings in light of such changes (Lustig, Brody, and McKenny 2008). While I lay out the religious positions on these technologies in the preceding chapters, when such positions are taken, my analysis centers on how women make sense of these technologies, their religion, and their conceptions of themselves as women when their pursuit of biological parenthood leads to engagements with ARTs. I show how in their meaning-making processes they are influenced by different values from multiple cultural systems of meaning and belonging, such as religion, that they contend with in their everyday lives.

Summary of Findings

I began the dissertation by laying out the background and social, political, and economic context for the practice of ARTs in the United States. Abortion politics in the aftermath of *Roe v. Wade* were central to IVF's trajectory in becoming an exclusive medical treatment accessible primarily to white, wealthier women, and thus part of the 'stratified system of reproduction' (Bell 2010, 2014; Chandra and Stephen 2010; Colen 2009; Jain 2006). Abortion politics also shaped US federal regulations for fertility and research on embryos (Thompson 2016; Wertz 2002).

In Chapter 2 I examined how devout Catholic women experiencing infertility reconcile their religious beliefs and maternal desire with the Catholic Church's highly restrictive position on the use of ARTs. While there are undoubtedly many Catholics who disregard Church

teachings as antiquated and irrelevant for their reproductive decision-making, the women in my sample highly valued the Church's teachings. Although the religious restrictions placed additional burdens on the women by making them feel like outsiders in a society that highly values such technologies, and frustrated with the Church for its silence on infertility and alternative treatment options, the women drew on their faith to criticize a medical industry that they viewed as immoral in its commodification of life and destruction of embryos, profiting from vulnerable women, and not addressing the underlying medical factors that might be contributors to infertility. By eventually drawing on Catholicism's valuing of adoption and its valorization of suffering, they formed alternative maternal identities and saw their refusal of ARTs as a stance that not only deepened their piety, but also preserved a natural social order informed by Catholic understandings of nature. I argue that in this process, they achieve a *moral femininity*, where refusing ARTs became a testament of their faith that allowed them to forge alternative maternal identities not rooted in biological motherhood.

In Chapter 3 I explored how evangelical Protestant women made sense of their belief in the personhood of the embryo while supporting technologies that routinely result in its destruction. I found that most women did not view these beliefs as being in conflict. Nevertheless, tensions between their beliefs emerged in their narratives. In such situations, women drew on the same idealized forms of femininity they enacted in forming attachments to embryos to explain the moral permissibility of their eventual loss, even if those losses were difficult for women to bear. I found that although these women were deeply opposed to abortion, creating embryos in the service of family-building meant that while losses were unfortunate, they were morally permissible, and sometimes even necessary in the process of creating the families they believed God intended for them.

This contextual understanding of the embryo is at odds with popular understandings of women with pro-life stances. Importantly, when embryo loss occurs in fertility clinics that are sites for achieving idealized forms of femininity such as biological motherhood, it is seen as permissible. However, in the context of the abortion clinic, it is seen as morally reprehensible because women are not viewed as embracing motherhood and go against gendered ideals. This moral disparity is accompanied by a disparity in the societal privilege of the primary clientele of these institutions. Fertility clinics are visited mainly by white, wealthier women, while abortion clinics are predominantly visited by lower-income, non-white women (Jerman, Jones, and Onda 2016a, 2016b). That these two spaces are occupied by women who are differently valued in society, also accounts for the uneven moral outrage at embryo loss occurring in both. This reveals another moral dimension of the stratified system of reproduction, where some women are shielded from moral condemnation while others endure it (Colen 2009, orig.1986).

In the final empirical chapter, I compared evangelical and Catholic women's understandings of ARTs to further explore their different approaches to these technologies, and their different stances on embryo loss in fertility clinics. I found that women had different views regarding the boundaries of nature and the kinds of collaboration between God, humans, and ARTs that are permitted within those bounds. For Catholics, ARTs transgressed such boundaries and were viewed as immoral impositions on nature. For evangelicals, ARTs and God had a collaborative relationship in creating life, though there were limits, such as genetic testing, to this collaboration. These different configurations of relationships between ARTs, God, and humans affected how women related to embryos. In contrast to evangelicals, Catholics related to embryos in absolutist terms where context and intent did not make embryo loss permissible. Importantly, these findings show that two religious groups often regarded as having the same

position on reproductive issues due to their devotion to the sanctity of the embryo and their opposition to abortion, actually have dramatically different views when it comes to embryo loss and ARTs.

Theoretical Contributions

This research contributes to theoretical conversations in the study of religion and gender, medical sociology, and science and technology studies (STS).

There has been a recent call to shift the study of gender from its marginalized status in the sociology of religion (Avishai, Jafar, and Rinaldo 2015). This research answers this call by using a gendered lens to study religion and by engaging with conversations about the place of agency and choice in religious women's lives. In Chapter 2, I show that devout Catholic women are not passive actors in their adherence to Church doctrine. Rather, they are thoughtful agents who challenge entrenched assumptions about liberal personhood and autonomy with regards to notions of freedom being rooted in choice. Devout Catholic women in this study are critics of a medical industry that they view as limiting notions of what it means to be a woman in its emphasis on pursuing biological parenthood at any cost. The women draw on religion to repair and build their sense of self-worth through expanding the boundaries of femininity—what I call achieving a *moral femininity*—to include forms of maternal identities not rooted in biological motherhood. While still conflating femininity with forms of fertility, the women are nonetheless able to empower themselves through embracing the Church's restrictions on ARTs, thereby challenging notions of freedom in liberal personhood that valorize choice and autonomy in fully realizing the self.

This study also challenges characterizations of “religious” women as an undifferentiated group, which obscures the different ways that religious women make sense of their worlds and the implications for issues surrounding reproduction. As I show in Chapter 4, viewing pro-life women as a homogenous group overlooks the important differences in how evangelical Protestant and devout Catholic women understand the relationships between God, nature, and technology. These differences result in relating to the embryo—which both groups ascribe personhood to—in remarkably different ways. This research highlights that everyday practices of religion not only differ at times from the teachings of religious groups, but are also a challenge for women who often find themselves navigating conflicting cultural messages about what it means to be a good, Christian woman.

Scholars of gender have emphasized the importance of an intersectional approach to understandings people’s different experiences in relations of power. While the women in this study are uniform in race and class, this research points to other intersections of institutional forces that are important to examine, namely, religion, gender, and medicine. Chapter 3 reveals the moral dimensions and hierarchies that make up the stratified system of reproduction by showing that for those who ascribe personhood to the embryo, the destruction of embryos can be viewed as either morally acceptable or morally reprehensible in different contexts. Intent and the social identities of actors can determine when something becomes a moral issue (e.g. stem cell research versus embryo loss in IVF), revealing disparities in who endures moral condemnation.

Scholarship in science and technology studies (STS) have challenged the universalizing claims of science and notions of nature by emphasizing the contingent relationships that constitute the socio-material world in various contexts. This research adds to these studies by showing how devout Catholic and evangelical women held not only different views of nature,

but how these conceptions of nature also informed their notions of what it means to be a moral actor in the world. While morality is often understood as emerging *a priori* from deeply held beliefs about what is right or wrong, this research reveals that enactments of morality are social processes that emerge from different constellations and configurations between the material, spiritual, and social.

Finally, this study contributes to the sociological literature on the experience of infertility in the United States, which are primarily based on clinical samples that do not account for those who refuse treatments. In addition, studies on the medicalization of infertility in clinical spaces have largely assumed these spaces and those who occupy them to be secular. Existing research overlooks the experiences of those who do not feel “compelled to try” ARTs and whose religious belief systems differently shape the experience of infertility (Sandelowski 1991). This study reveals that for some people experiencing infertility, religion matters.

Implications of Findings

This research has implications for our understanding of the relationship between religion and science in Western contexts, the problem with essentializing religious women in research, and for understanding religious people's views about technologies such as ARTs.

While the Western medical model demarcates science and religion as distinct domains, in practice, the distinction between science and religion—between knowledge and belief—may be less clear than is so often presumed, as when the laboratory, an emblem of the scientific realm, is seen as God’s domain (Latour 2010; Roberts 2016, 210; Roberts 2012). Both science and religion "make reality" through mediated relationships with objects (Latour 2010; Roberts 2016,

210; Roberts 2012). While the medicalized model of infertility purportedly supplants religion, in fact, people's lives are mediated by both science and religion, particularly in the sphere of reproduction, where both institutions are moral authorities that delineate how families ought to be created.

Assumptions of secularity in examining the practices and meanings of technologies like ARTs in Western contexts overlooks those who might not enter those spaces for religious reasons, but also misses how religious sensibilities shape those within these spaces. Sociological studies of ARTs in the United States have not focused on religion despite a significant proportion of the population affirming the importance of religion in their lives (Pew Research Center 2015). Additionally, sociological studies on the relationship between science and religion have privileged the study of scientists in university settings (Ecklund, Park, and Sorrell 2011; Larson 1997; Larson and Witham 1998; Stark 1963). Secular approaches to the study of technology in Western contexts overlook the experiences of the religious who engage with technologies and reinforce assumptions about religion being divorced from the scientific realm.

Based on the present study, one might be tempted to argue that Catholic women's views of ARTs are "anti-science," but this would be a mischaracterization. Catholics were opposed to particular kinds of technologies and embraced many other "high-tech" medical treatments. NaPro (see Chapter 2 and 4 for a discussion) relies extensively on scientific knowledge. Moreover, scientific advances have sometimes lent impetus to religious opposition to reproductive technologies.

This study points to the importance of being more attuned to the nuanced reasoning surrounding religious people's views about emerging technologies, and what leads them to ultimately embrace or reject them.

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