

# Chapter 1

## Compatible Contradictions: Religion and the Naturalization of Assisted Reproduction<sup>1</sup>

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### 1.1 Introduction

In first-world countries the popular autobiography of assisted reproduction organizes itself largely around the paradigm of childless marriage, which most of the world regards as a social problem, or at least as a social disvalue. Biotechnology enters the equation when culture transmutes childlessness into infertility, a disease to which one can apply medical therapy.<sup>2</sup> Reproductive technologies rarely cure the "illness," which affects 8% to 12% of heterosexual couples worldwide (Inhorn, 2003a, 1837), but they often provide a way around the symptoms, enabling wives to conceive and bear children. Hence the stereotypical, sympathetic American portrait of infertility patients: loving, otherwise healthy, childless (or childless but for the intervention of reproductive technology), white, economically stable, married women and men.

These married couples raise the first-level questions about "nature" and "naturalness" that have dominated Euro-American bioethical debates about assisted reproduction: do its methods resemble unassisted marital reproduction closely enough to be acceptable? Is assisted reproduction being used as an excuse for an objectionable level of tampering, so that it becomes a means of back-door genetic enhancement? These concerns in turn reveal the degree to which "nature" (supposedly mere matter that can be dissected and manipulated) and "culture" (human

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<sup>1</sup> We refer to Sarah Franklin's argument that "the point of much social scientific analysis of IVF... is not that it offers yet further proof of the inherent irrationality of either people or scientific thought, but rather that *its rationalities are fully compatible with others that may contradict them*" (Franklin, 2006, 550; italics in original).

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<sup>2</sup> Paxson (2004, 220). Adopting the "illness" metaphor creates a more sympathetic image, one under which assistance, generosity, and compassion are appropriate responses. Adopting the metaphor of "consumer," which would be perfectly appropriate given the financial investment infertility treatment typically involves, calls up quite different sentiments. See, e.g., Kahn (2000, 170) and Becker (2000, 27).

constructs in which meaning and value are created) in fact remain intertwined in contemporary experience and moral language.

The picture becomes even more complicated when we acknowledge the patriarchal social context of many childless marriages. In many cultures treatment is motivated by a drive to parenthood, which is considered a nearly ubiquitous condition for marital happiness and security, which in turn is often also a woman's primary hope for financial stability. These are often the same settings in which rapid rates of population growth, high rates of unwanted and dangerous pregnancy, inadequate health care, compromises of women's rights, and precarious social status for women are the rule; in which reproductive tract infections render disturbing numbers of women infertile; and in which exposure to unregulated pollution compromises male fertility. These conditions raise pressing questions about the welfare, rights, and freedoms of married women and their children, but also increasingly of their husbands.

In addition, the true story of assisted reproduction extends far beyond the borders of heterosexual childless marriage. People increasingly employ assisted reproductive technologies outside this context. A close look at true uses of assisted reproduction raises further questions (sometimes in addition to the previously-mentioned ones, sometimes instead of them). In the United States and other first-world countries fertile single women and men, gay couples, and lesbian couples employ reproductive technologies in the hope of raising genetically related offspring from infancy. Likewise, fertile married couples make use of them in order to avoid genetic defects and, in some cases, even simply to determine the sex of their offspring.<sup>3</sup>

In each of these cases new challenges arise, nearly all connected to "nature" and "the natural": Does nature, through sexual differentiation, determine who may reproduce, and if so, to what degree? What is the natural shape of the family? What is the natural meaning of marriage? What relationship to nature does infertility bear when it clearly results from disease or pollution arising from human decisions, or when it seems arbitrary? What is "natural" or "unnatural" about the patriarchal family structures that fertility treatment reinforces in many cultures? How does self-conscious adherence to a concrete religious tradition function to certify these convictions and to dictate which will hold sway when they appear to conflict?

We argue that narrow approaches to these questions are of limited use. We choose instead to combine anthropological and religious-ethical inquiry in the hope of providing a sense not only of official religious teaching on assisted reproductive technologies (ARTs) but also of the thinking and behavior of ordinary people for whom (and ideally by whom) policy is created and ratified.<sup>4</sup> Consequently our coverage will not be absolutely even. We will revisit a few religious communities and cultures

<sup>3</sup>Gender selection through ART procedures is illegal in many nations and considered immoral in others, but it is clearly highly desirable even in the United States. Under the banner "NEW, LOWER PGD SEX SELECTION PRICING" one clinic offers "the chance of obtaining a desired pregnancy gender outcome that ranges from excellent to virtually GUARANTEED." See [http://www.fertility-docs.com/fertility\\_gender.phtml](http://www.fertility-docs.com/fertility_gender.phtml) (accessed August 11, 2004).

<sup>4</sup>On this tension, see Inhorn and Sargent (2006); on the values, contexts, and priorities that shape this reasoning, see Ryan (2004).

several times in order to elaborate the connections among their politics, theologies, and social practices, with the hope that this exercise will enable the reader better to discern such connections in communities we have not discussed. In addition, we intentionally attend at some moments to the ways in which religious individuals interpret ARTs and at others to the debates and declarations of recognized representatives of religious communities. At some points we will analyze a religious community's official documents; when these are lacking, we will report majority opinions and typical approaches. As we hope to show, these data and strategies of interpretation exhibit considerable resonance. But here again our intent is not to present a comprehensive picture or to make universal claims but to suggest approaches that might be used to test our hypotheses in communities and circumstances we do not cover.

We introduce our topic with a discussion of the significance of recent debates over nature and kinship for evaluation of ARTs. We articulate our own method and introduce the technologies that give rise to the questions. We then turn to an extensive discussion of the "natures" that ARTs enforce or transgress, paying close attention to the way in which religious belief—taking shape in a particular political, economic, and communal setting—affects these judgments about naturalness. We explore ideas of the natural family and the place of marriage and childbearing that they entail; we analyze reactions to third-party involvement in family-formation through adoption, gamete donation, and surrogacy; we discuss ideas about the nature and status of unused embryos; we examine ideas about natural gender roles and identities and the ways in which infertility and ARTs erode or preserve them; we examine the normative status of the so-called new families ARTs make possible: genetically connected gay and lesbian partnered families, and intentionally single motherhood; we analyze intercourse and conception as a single or divisible natural process; and we reflect briefly on the "naturalness" of using ARTs to select for or against disease, gender, or traits. Then we step back from these distinct but related issues to ask two larger questions. First, how does pronatalism of various kinds interact with a specific set of religious beliefs and practices in a particular cultural setting, and what are the sometimes surprising practical consequences of this interaction? Second, how do religious people incorporate the idea of ARTs into their functional religious universes, whether they ultimately accept or reject them? How must they alter their understandings of authority, power, law, divine will, or the cosmos in order to accept ARTs as natural? We close with recommendations that policymakers pay attention to religious people, and not merely to religious statements and religious leaders, if they desire an accurate understanding of religious people's responses to ARTs and also of the pressing social issues ARTs raise but that religious discussions of them often ignore.

### 1.1.1 The Boundaries of "Religion"

If "religion" is notoriously hard to define, "religious people" is nearly impossible. Within the field of religious studies, the test is merely that a person claims to be

religious. However, for the purposes of this article, which is concerned with broad global trends that may affect policy and law, religious people are people who self-consciously bind themselves to one of the established, communal "great traditions" (Buddhism, Hinduism, Christianity, Judaism, or Islam). Religious people suffuse significant dimensions of human activity with religious meaning and subject important decisions about the shape of life (marriage, parenthood, etc.) to religious reflection, guided by their community's particular tradition of arraying religious authority. In addition, theistic religious people typically see divine power and intention at work in their daily activities, successes, and trials.

### 1.1.2 Nature's Polymorphism

Scholars have noted that questions about "nature" have two important consequences for our evaluations of biotechnology: "'nature' often continues to serve, as it did prior to the Enlightenment, as a moral touchstone" (Lock and Kaufert, 1998, 19–20), and science and religion, rather than being assigned to different domains of life and intellect, are instead "often actively [woven] together"<sup>5</sup> in a way that confounds Western predictions about which fertility practices will be acceptable or popular in a given culture.

We find Marilyn Strathern's work helpful for articulating and analyzing these connections from a Western point of view. Strathern's first helpful insight is that as the mystery of nature—seen in the West as the machine that humanity can neither fully understand nor overpower—shrinks in the face of science and technology, our sense of living within a vital cultural tradition inventively built within nature's limits weakens as well. In short, a weakened nature means a weaker, and not a stronger, culture (Strathern, 1992a, b). Religion—relying on both a strong sense of the natural and on a highly developed, detailed cultural tradition—would therefore be expected to loosen its grip on our moral vision. Strathern argues that meaning-making in the West is already becoming mostly a matter of self-consciously self-creative choice, a choice that—thanks to the lack of a default set of agreed communal meanings—is bleakly mandatory.<sup>6</sup> In such a setting, religious concerns would seem to have little influence over reproductive choices.

<sup>5</sup>Linda Layne's response to "Divine Interventions and Sacred Conceptions: Religion in the Global Practice of IVF," American Anthropological Association, November 23, 2003, 2; see also Layne (1992).

<sup>6</sup>For instance, it is no longer possible for a couple—or for a woman as always-and-everywhere potential mother—simply to fall into childlessness by default. One must now actively choose whether to pursue technological means of becoming a parent or mother. On this pressure, see Lauritzen (1993, 39–40); Franklin (1998, 107–113, *passim*); Handwerker (1998); and Paxson (2004, 31–32). Handwerker relates one Chinese woman's comment on Chinese reproductive policy: "The one child policy is really the 'you must have one-child policy'" (1998, 183).

The discussion that follows will contradict this conventional wisdom. We argue that, on the contrary, all over the world communal religion continues to exist in living, meaning-generating, holistic forms; in most cultures its strength never ebbed, but even where it might seem to have been in decline, it is reasserting itself. The concern to conform reproduction to religious tradition is common, and in many places ascendant. In most of the world questions of religion and nature are vital both to ART practitioners and patients and to those who opt not to perform or use ARTs. Religious people tend to believe that only a credible account of ARTs' compatibility with an upright life generally—and with a religious view of nature's relationship to the divine or to the structure of the cosmos in particular—can justify their use. Therefore the religious questions—What are the spiritual and theological meanings of infertility? Of parenthood? In what way is the divine active in daily life, and how can its presence best be acknowledged and respected? What is the divine will, or the shape of a holy path? In what way does the divine or the power of the cosmos inhabit or use persons and their bodies?—are in fact paramount. Consequently, anyone who wishes to craft or study ART policy must attend carefully to religious customs and arguments.<sup>8</sup>

However, we are not therefore embracing the typical arguments of contemporary constructive religious bioethics. This literature tends to assume that each biotechnological development presents an entirely new, never-before-encountered threat to religious ways of thinking and behaving and therefore to religion itself. Thus ARTs are said to pose unprecedented challenges to religious concepts of nature. We agree that they pose new questions, but we contend that they do not pose new kinds of questions. Technology, kinship, and the meaning of nature are recurring challenges for religious traditions.

We argue rather that many religious traditions are resisting the diminution of both culture and nature by employing methods of reasoning and response that they have developed over centuries. Religious communities tend to naturalize technology, incorporating it pragmatically but artfully into a religious vision of the world that has a definite place for nature-as-sacred-creation. An extreme but familiar example might be the Amish. As a community they long ago rejected the use of electricity, motorized vehicles, and telephones. These are still forbidden in cases of what might be considered personal convenience, but where business with the "English" world requires it, they are acceptable. Hence electricity might be used to meet refrigeration requirements for a dairy farm but not for light or refrigeration in the home; a pay telephone might be used to transact business, but phones are not found in Amish kitchens; owning a car is "worldly," but use of a taxi service to take landless young Amish to paying jobs, or a sick person to a distant doctor or

<sup>7</sup>From a Christian or Muslim perspective, it makes sense to speak of God's will for humanity. Jews and Buddhists would not use the language of divine will. As a way of indicating the outlines of a devout or righteous life across traditions we have chosen the phrase "holy path."

<sup>8</sup>Language about "god" and "divinity" is inappropriate to Buddhism, which is non-theistic but nevertheless possesses a strong sense of order, function, and relationships in the universe.

hospital, is acceptable. Technology is selectively accommodated precisely for the purpose of preserving health and maintaining the community's independence and separation from the highly technological culture in which it must function. Similarly, often religious people—sometimes authoritative leaders, sometimes only laypeople—embrace ARTs specifically in order to fulfill devotional, vocational ends that are integral to their religious traditions as they understand and practice them, even when the ARTs apparently also transgress some existing religious laws or theological claims.

Thus when religious people are deciding how to react to ARTs they are not typically deciding between flouting nature and uncritically obeying it. Rather, they are drawing on traditional understandings of nature—making use of precedents and analogies that already have meaning within their traditions—in order to give meaning and place to the new technologies, to whatever degree they may embrace them. As Aditya Bharadwaj has written about Indian Hindu clinical practice, Western secular assumptions about the opposition between science and religion do not fit religious people's understanding of the world: "assisted conception conjoins seemingly disparate domains of the traditional and the modern, the sacred and the profane, the human and the superhuman, science and religion, working in tandem to produce human life" (Bharadwaj, 2006). Each acceptance of new methods (and each thoughtful rejection) is a transformation of the tradition's view of nature, inevitably, but on the tradition's own terms. There is development but rarely a sharp discontinuity.

This is the second point at which Marilyn Strathern's analysis is helpful to our argument. Strathern has described how this process of naturalization functions with regard to the category of kin relations, a process that is essential to any analysis of ARTs. She argues that views of "natural" kin relations are not static. The "traditional" Euro-American natural family (in which "real" kin relations are biogenetic) is actually a relatively recent, post-Darwinian social construction that prides itself on its basis in modern, scientific fact. ARTs simultaneously unsettle this vision of the nature of things by interfering in and complicating kin relations (which in people's minds remain dependent on genetic relationship) and reinforce the vision by enabling genetically related families to exist where formerly they could not. One consequence of the reinforcement is the normalization or naturalization of ARTs as alternate means to the accepted end, the "natural" biogenetic family. The other consequence is awareness that what seemed to have been an immutable or infallible vision of nature (biogenetic families produced through heterosexual coitus) is in fact open to revision and therefore may be an uncertain basis for "reality." This awareness in turn reduces nature's justificatory power (Strathern, 1992a, 43, 47, 52–53, 177–178, 195; 1992b, chs. 1–3; see also Franklin, 1991). Strathern sees Westerners as caught between two alternatives: abandoning the modern project of natural scientific rationality altogether for some non-scientific, immutable vision, or replacing "immutable nature" with a new gold standard, our evolving, possibly novel scientific knowledge of nature.

We accept the validity of this dilemma for some Westerners but argue that, in most circumstances worldwide, religious people regard themselves as rejecting Strathern's dilemma and taking a third road. They do not believe that new discoveries

can dislodge nature, for nature itself is (depending on the tradition) either a divine creation, or at least the given system in within which all existent beings can and must find their meaning. Religious people therefore appropriate only scientific descriptions of the world that can be deployed within existing religious visions of it (often even employing scientific language to elaborate these religious visions). Similarly, they make use of ARTs only when and if they believe ARTs help them adhere to approved, existing ideas of the divinely-intended natural family.<sup>9</sup>

In this process of naturalization the ideas of "nature" and the "natural" family evolve somewhat even when traditional ideals are upheld. Strathern (1992b) and Charis Thompson (Thompson, 2005, ch. 5; see also Lewin, 1998, 164–177) have implied that as a result ARTs, even when employed in support of traditional family forms, inevitably subvert them, heralding the end of the "natural" Western, hegemonic, genetically related, heterosexual nuclear family and the beginning of new, if undetermined norms that are themselves biological/cultural amalgams. To some extent the debate can be framed as a matter of emphasis (is an affirmation of a traditional form that nonetheless leads to that form's transformation fundamentally conservative, subversive, or both?<sup>10</sup>). But for us the more important point is that all use of ARTs involves naturalizing technology by reifying unquestioned "natural" ideals and then incorporating technology within them. In Thompson's words, naturalization in this sense is

the means by which what sometimes gets referred to as 'bedrock' is established and maintained. Its examination invites an analysis of the role of specific configurations of bedrock in establishing the moral, epistemic, and technical taken-for-granted essential to the practice of infertility medicine (Thompson, 1998, 66).

In the West, for example, this means adhering to nature by appropriating ARTs under the banner of supporting the reigning vision of the genetically related "natural" family rather than under the banner of interfering in (disrupting) it. Indeed, Europeans and Great Britons have attempted to anticipate and cut off possibilities for radical uses of these technologies. For instance, the 1978 Warnock report's limitation of ARTs to stable, cohabiting, heterosexual couples was endorsed by liberals and conservatives alike. Research conducted in Finland reveals a sense that ARTs are justified by an inevitable, biologically-rooted human desire for genetically related children (and that adoptive parents—and by extension any parents of genetically unrelated children—are performing a risky act of supererogation).<sup>11</sup> For similar

<sup>9</sup>For non-theistic traditions like Buddhism, use of terms like "God" and "divine" is clearly problematic. We have attempted to avoid the term "God" when speaking of religions in this broadest sense; in places we have settled on "divine" as the easiest concise indicator of a foundational "natural" reality with structure, logic, and purpose.

<sup>10</sup>For an example of this tension between intent and result, see Mulkay (1994, 712–713); for examples of parenthood that both conform and subvert, see Lewin (1998).

<sup>11</sup>In England supporters of embryo research argued "that it would help to make the conventional family more widely available." See Mulkay (1994, 708, see also 710, 711) on "normal," disease-free children as part of the new definition of the conventional family. On Finland see Malin (2002).

reasons the Greek Orthodox communion, and other communions that endorse limited use of ARTs, tend to permit homologous procedures but frown on the introduction of third-party gametes (Sheean, 2004).

We will address the religious naturalization, or "divinization," of technologies in greater detail later in this chapter. For the moment, it seems important to say that some traditions—Roman Catholicism, for instance—give explicit theological justifications for this process, arguing that reason, which is part of human nature, does and should analyze and utilize material nature for human ends. Not surprisingly, the most interesting debates within traditions erupt in the tensions between "nature" as an essence or characteristic to be realized (for instance, motherhood, seen as a dimension of each woman's potential and a goal toward which she strives) and "nature" as a pattern laid down in biological events uninterrupted by technology (for instance, "natural" heterosexual fertilization and conception of a child). Quite frequently both patients and practitioners of ARTs see themselves to be subordinating one vision of nature to the other and also feel this subordination as a loss or sacrifice that, however necessary to the pursuit of the other vision of nature, is genuinely regrettable. So, for instance, in Confucianism, accepting surgical intervention (giving up "natural" heterosexual intercourse as a path to fertilization) is justified by its potential to fulfill the "natural" goal of parenthood (Qiu, 2002, 78). Conversely, in Roman Catholicism, declining the "natural" end of parenthood is justified, however regretfully, by respect for the duty not to transgress the boundaries of the "natural" process of conception (Congregation for the Doctrine of the Faith, accessed online, 8, 11). Thus both intervention in material nature and refusal to intervene in it are naturalized by their ultimate support for regnant visions of nature (see Becker, 2000, 6; Strathern, 1992b, 56).

Yet, as we will also show, not all cultures root family in immediate genetic relationships in quite the same way Euro-Americans do (Franklin, 1997, 97–99). In other places the tension that naturalization must resolve might not be the tension between immutable biological nature (or matter) and artificial technology (or mind) but another: group identity versus foreignness; motherly selflessness versus modern self-possession; self-interested individualism versus communal concern; or the sense of God as personal companion versus God as guardian of a religious institution (Kahn, 2000, 159–160; Paxson, 2004; Lock and Kaufert, 1998; Roberts, 2006). In these situations ARTs do not necessarily symbolize an encroachment by one side of the tension on the other, and so—while they present challenges to thinking about kinship—they do not always disrupt kinship's foundations and may even reinforce them (Kahn, 2000).

Given this variety of responses, we propose that ART debates are an opportunity not only to compare the traditions' views of nature but also to examine how the traditions' strategies for dealing with technology differ. Obviously, we also reject claims that ARTs can destroy traditional religion, Western civilization, or the idea of nature in general; traditions and cultures survive precisely because they have well-honed strategies for dealing with just such challenges. Thus the question is not only how ARTs alter the *concept* of nature in each tradition, but also, what are the institutional and personal *strategies* for dealing with technological innovation in

each tradition? And what do these strategies, when applied to the case of ARTs, further reveal about the *existing idea of nature* in each tradition, in each cultural context?

### 1.1.3 Method

In order to answer these questions satisfactorily, we have departed from the method normally used to present religious thought to policymakers. Most such writing on bioethics and religion begins with a survey of the official positions of religious groups on an issue and, possibly, of the opinions and arguments of their major exponents and critics. While this kind of investigation is certainly necessary and responsible, it has two important disadvantages. First, it unavoidably privileges traditions that organize themselves bureaucratically, develop coherent ethical systems, have mechanisms for issuing statements, and value theological and ethical unanimity highly, leaving the religious opinions of large proportions of the population unrepresented. Second, potential practitioners and users of ARTs are not by and large theologians but laypeople attempting to live their lives faithfully in an imperfect world and—perhaps even more important—in a concrete, complex cultural, social, political, and economic setting. These real lives are lived in the nexus not only of competing cultural and religious values and practical needs but, even more importantly, of religious values that are in practice in tension with each other. The methods that religious people employ in order to resolve all of these tensions are likewise complex and can be reduced neither to official statements nor to statistics about how people actually behave.

For these reasons we have chosen to follow Arthur Kleinman's lead, combining cultural anthropology and bioethics to investigate "the local moral worlds in which patients and practitioners live, worlds that involve unjust distributions of power, entitlements, and resources" (Kleinman, 1995, 48). Kleinman argues that to the degree that bioethical argument (on which many religious statements are modeled) is abstract, universal, and dependent on assumptions about relatively easy access to resources, it is a "charming romance" recommending "utopian virtues" in situations of overwhelming suffering and existential and practical conflict (Kleinman, 1998, 48). He recommends that bioethics begin not with abstract systems but with "the lived flow of interpersonal experience in an intensely particular local world," a flow that includes the commitments, uncertainties, and contradictions endemic to life in that community and time, intentionally embracing "the murky indeterminacy of real lives and the messy uncertainty of real conditions" (Kleinman, 1998, 54). Although we will frequently refer to religious bioethical statements, our intention is to alert policymakers to the ways in which such statements are actually received and employed in these local moral worlds, and to the tensions the statements attempt to resolve. Public bioethical debate tends to be either utterly realist (about the possible) or utterly idealist (about theology or philosophy, thinly veiled) but rarely combines the two in any finely-textured discussion of real moral experience.

In order fully to grasp what religious people think about ARTs and nature, then, it is essential to look carefully at how they respond to official statements in concrete circumstances or—where statements are lacking—how they generate their own working understandings and guidelines. Qualitative anthropological research is critical for unearthing these fundamentally theological moves, as it is for understanding how a person's context affects the strategies she employs in making them and the conclusions she draws from them. Our choice to combine anthropological and theological inquiry will necessarily result in some loose ends, but we hope the richness of the texture that this approach gains will make up for this unavoidable loss of tidiness.

Finally, our analysis is informed by feminist reflection on infertility and ARTs. Charis Thompson's artful review of recent feminist fertility literature points out that trends in feminism are charted perfectly in the evolution of feminist concerns over infertility. Early second-wave feminism, eager to disrupt ideologies and institutions that enforce gendered roles and identities within a system of racial and social stratification, viewed all unhappily infertile women as victims of patriarchal ideology that had brainwashed them into considering motherhood as a need. As a result, some women who desired to become mothers felt unjustly condemned. More recent feminist writing, expressing compassion for what turns out to be a particularly female heartache that transcends class, has embraced ARTs as instruments of reproductive choice but has also lobbied for policy justice and procedural safety and against exploitation of women-surrogates and donors (Thompson, 2002; see also Thompson, 2005, ch. 2). We hold the latter position but will argue that, worldwide, patriarchal practices and racial and social stratification converge to produce a situation in which most women's decisions about reproduction are still far from free. Patriarchal cultures outside the United States receive somewhat more attention than American patriarchy, but this is because less familiar cultural and religious settings are often fresher—and therefore more instructive—examples of the convergence of multiple factors to create patriarchal social structures. In addition, the inordinate focus on women and infertility has obscured the personal heartache and social stigma of male infertility, a problem whose significance and resolution are just beginning to receive attention (see for example Inhorn, 2002, 2003b, 2004, 2006a, 2007). It is not possible to explore all dimensions of these questions of gender, race, and class explicitly in the argument that follows, but they inform our thinking at every point.

## 1.2 Points of Ambiguity and Resolution

### 1.2.1 Themes and Variations

Lurking among the social and religious factors that influence people's thinking about ARTs are several that cannot be reduced to the standard questions but have a great deal to do with how the standard questions are resolved. These factors are

strongly connected with the practical exigencies of daily life in a region and with ways in which practical structures and decisions of life are interpreted. We shall reflect on these more systematically later in this essay, but they should be kept in mind throughout the discussion.

- Explicit or implicit pronatalism at any of several levels (governments, religious institutions, cultural traditions, economies, and local communities) can strongly influence views of ARTs, as can an atmosphere of anti-natalism, delayed child-bearing, or strict family limitation. Messages that conflict at various levels produce especially interesting cases.
- The methods by which people navigate "upstream" against their traditions, or deal with genuinely conflicting strands within traditions, vary greatly. They depend in turn upon the locus of religious and moral authority (priest or rabbi? text? medical practitioner?) and upon the means that religious groups use to determine which of a number of competing values "trumps" the others.
- In discussions of kinship it matters whether nature is seen as identical to society (elevating adherence to social structures to a direct religious obligation), as society's foundation (providing a critical standard according to which social structures can be judged and reformed), or as society's antithesis (representing a condition of chaos, disorganization, or sin that society must control or overcome).
- The degree to which the divine will or cosmic structure is understood to be evident in universal physical structures, traditional social arrangements, technology, religious leaders, and portentous events in individuals' lives is of profound significance for their vision of religious life.
- A community's eagerness or reluctance to use "nature" as an interpretive category is telling but not determinative. Reluctance to use it is sometimes an intentional resistance to other, apparently hegemonic religious or to secular discourses that employ "nature" as a source of moral authority. Acceptance might imply any of several related themes: for example, nature as well-designed physical creation, perhaps left to its own devices, or perhaps inhabited by a power that occasionally gives it a little boost; and nature as the divinely intended character, purpose, and end of a thing. In either case, human reason may have a role to play in assisting the existing systems to function or in improving realization of existing ends.

In some cases these variations are determined by official theology or law; but whether they possess this kind of authority or not, they have immediate authority also at the level of ethos, of customary assumptions and behaviors. This latter, more immediate authority can be more compelling.

### 1.2.2 The Technologies

Put simply, any conception that does not follow from heterosexual intercourse, unassisted and uninterrupted by third parties, counts as assisted reproduction. In its most basic and unproblematic form, assisted reproduction involves optimizing the



chances of conception by drawing upon increasingly sophisticated knowledge of the human reproductive system to adjust the timing and conditions of intercourse, possibly employing fertility-enhancing drugs. Conception under these circumstances is by all accounts still considered “natural,” for no external process alters the structure of heterosexual intercourse or guides the paths of the gametes or the process of fertilization or implantation. This is instructive, as it implies a nearly unanimous, lowest common denominator description of “natural” reproduction. Controversy arises over the following progressively more complex interventions:

- **Artificial insemination (AI):** In artificial insemination, sperm are introduced into a woman’s uterus during the fertile part of her menstrual cycle. In some cases the sperm are collected from the woman’s husband or male partner; he may ejaculate into a container after masturbation or into a perforated condom during intercourse. In this case the procedure is known as **artificial insemination-homologous** (sometimes “**husband**,” **AIH**). If a woman has no male partner, or her partner lacks adequate sperm, donor (or heterologous) sperm may be used; in this case the procedure is labeled **artificial insemination-donor (AID)** or **donor insemination (DI)**. Especially among lesbians AI has often been performed at home, with anonymous or known donor sperm, but concerns about disease and paternity rights have led more and more women to pursue AI in clinics under medical supervision.
- **Gamete intrafallopian transfer (GIFT):** A woman with intact fallopian tubes takes drugs to induce superovulation; a doctor removes ova, mixes them with ejaculated homologous or donor sperm, and inserts the gametes into her fallopian tubes, the normal environment for fertilization. In a variation, **zygote intrafallopian transfer (ZIFT)**: the doctor transfers already-fertilized ova into the fallopian tubes. In either case, zygotes may develop into embryos, descend into the uterus, and implant there.
- **In vitro fertilization (IVF):** Commonly known as the “test-tube baby” procedure, in vitro fertilization is particularly helpful for women with blocked fallopian tubes. It too begins with a drug regimen to induce superovulation; in this case, however, the harvested ova are mixed with homologous or donor sperm and cultured for 48–72 hours. At the end of this period, the physician removes a small number of embryos from the culture dish and transfers them to the woman’s uterus through a catheter, where one or several may implant and grow normally. Unused viable embryos may be frozen for future use or destroyed, and unused ova may be donated or discarded. This procedure also allows for the use of **donor ova** and/or **surrogate mothers**, since fertilization occurs in the laboratory.
- **Surrogacy:** In some countries, when no viable womb is available—either when a woman cannot carry a child, or when a single man or gay couple wishes to conceive—aspiring parents may contract with fertile women to undergo IVF and carry a pregnancy to term for them.
- **Intracytoplasmic sperm injection (ICSI):** In this procedure designed to overcome very low sperm count or low sperm motility, a doctor removes ova from a

woman just as in other procedures, but also—often surgically—removes sperm from the man. Single sperm are then injected into single ova, forcing fertilization of particular ova by particular sperm. After 48–72 hours, a small number of embryos are transferred to the woman’s uterus through a catheter. As in standard IVF, donor ova may be used, although donor sperm rarely are, as the procedure was developed to facilitate fertilization by nearly-infertile men.

- **Ooplasm donation:** Designed to overcome the weaknesses of “elderly” eggs, this technique involves introducing donor ooplasm (which contains another, younger woman’s mitochondrial genetic material) into an older woman’s ovum in order to facilitate fertilization; then ICSI is performed with the older woman’s husband’s (or possibly even a donor’s) sperm. The resulting embryo then contains genetic material from three gametes, although it contains nuclear material from only two.<sup>12</sup>
- **Microsorting:** Applicable to any form of ART, microsorting sperm by weight allows sperm to be separated by sex before fertilization, either to avoid sex-linked diseases or simply to increase the chances that a child will be of the desired sex.
- **Preimplantation genetic diagnosis (PGD):** This procedure may be used with any form of IVF. Single cells are removed from eight-cell zygotes for genetic testing. Zygotes that match desired traits (preferred gender or freedom from genetic disease) are selectively implanted in the woman’s uterus.

Although each technique invites its own questions, IVF and its variants, as we will see below, raise issues that cover nearly the whole range of concerns about “nature” and “the natural.” For this reason the discussion will concentrate primarily on IVF, with the hope that implications for other procedures will be clear.

### 1.2.3 Processes and Nature: The Sticking Points

In work with American Jewish, Christian, and Muslim thought, Baruch Brody has noted that the following areas of concern, rather than the traditional bioethical categories of harms, rights, or injustices, preoccupy religious leaders:

1. The new reproductive techniques disrupt the connection between unitive conjugal intimacy and procreative potential that is required by morality.
2. The new reproductive techniques often introduce third parties into the process of reproduction, and this is morally illicit.
3. The new reproductive techniques often result in a morally illicit confusion of lineage, since children are often unaware of their biological parents.
4. Some new reproductive techniques (IVF) often involve a failure to implant fertilized eggs. This is a form of early abortion and is therefore morally illicit.

<sup>12</sup> According to Charis Thompson this procedure was forbidden in the United States in 2001 but nevertheless has “wide clinical application” here (Thompson, 2005, 272–273).

5. The new reproductive technologies often involve a dehumanization of the reproductive process and are therefore morally illicit.
6. Some new reproductive techniques (especially surrogacy) involve commercialization and exploitation that makes them morally illicit (Brody, 1990, 46–47).<sup>13</sup>

As we show below, questions about ARTs and nature closely parallel these concerns. In addition, at each step the moral objections often amount to a judgment about “unnaturalness.” However, particular religious cultures often choose to question the “naturalness” of very different reproductive techniques and processes or have very different reasons for finding the same procedures problematic.

### 1.2.3.1 The Natural Family

A significant proportion of the questions that ARTs raise has to do with the shape of the “natural family”: What are its limits? To what degree can they be stretched, and for what purposes? Significantly, in our judgment ARTs typically are employed in the service of (and extension of) existing notions and ideals of family rather than in order to replace them (Inhorn, 2003c, 120; Becker, 2000, 35; Khanna, 1999). A familiar American example of extension is lesbian and gay couples’ use of ARTs to raise biologically related children in households that closely resemble those of “normal” heterosexual married couples. In India and China ARTs may even be providing unprecedented means to transform a preference into a near mandate. Before, bearing sons rather than daughters either was mainly a matter of luck or required willingness to commit infanticide; now a combination of diagnostic testing, abortion, and ARTs is being used to support the traditional preference for male children. Because failure to produce male children often impairs women’s status and economic stability, and in patrilocal rural societies can spell poverty for the entire household, women make use of these services in large numbers, however reluctantly.<sup>14</sup>

<sup>13</sup> At times the language of harm, right, or injustice is used, but it often follows on judgments about nature, so that harm or injustice is defined as a transgression of “the way things are meant to work.”

<sup>14</sup> On China, see Handwerker (2002). On India, see Sen (1990). Emily Oster has suggested that at least part of the “missing women” phenomenon may be attributable to hepatitis B infections in mothers, which significantly increase the chance of giving birth to a boy (Dubner and Leavitt, 2005). In India diagnostic techniques are being used to abort girls in huge numbers and also to exploit women’s fear of carrying a girl, sometimes resulting in abortions of boys by unscrupulous clinics out to make a profit. These abortions also tend to lead to reproductive tract infections because diagnostic and surgical procedures by clinics vying to stay low-cost and profitable are often unsanitary or otherwise sloppy; infection in turn raises the infertility rate. See Khanna (1999). Note, that religion is often an argument used by unscrupulous, often unqualified clinic staff to reinforce a woman’s/couple’s desire for a boy. Khanna implies that ARTs may be fanning an existing Indian preference for boys into a frenzy, therefore magnifying the tendency by providing a way to act on it. See also Meseguer et al. (2002); Schenker (2002); Allahbadia (2002); Mori and Watanabe (2002); Chan et al. (2002); Hanson et al. (2002); Sills and Palermo (2002); Renteln (1992).

Other questions abound. If the family’s given nature includes transfer of wealth, education, status, and other advantages according to a strict system, then transgression of that system becomes a matter of justice not just to one family’s children but to divine plans for human society broadly. On this view ARTs could, if not carefully regulated, cause suffering, confusion, and social collapse. In addition, in some accounts there is an assumption that blood relations “naturally” produce more constant, perceptive parents than chosen relations, throwing donor procedures into doubt.

There is also the question of genetics and identity: do genes dictate the moment of human existence, i.e., the moment after which a zygote is an existentially privileged being and not merely a [collection of] cell[s]? Do genes dictate the character of relations between persons legally, instinctively, emotionally? The key test is adoption: Is adoption at root a second-best way to make up for parentlessness and childlessness, and thus to complete the true natures of adults and children whom chance has deprived of a family? An act of benevolence rooted more in compassion and a sense of justice than in the desire to reproduce the model of the natural family? Or a recognition that commitment and social practice, not physical relatedness, bond parents and children, no matter what their genetic connection? ART arguments can follow adoption arguments unless another criterion is determinative in the speaker’s vision of “nature.”

Far more commonly, the question is simply whether ARTs realize or transgress the structure and intent of what religious people typically hold to be the “natural” standard, heterosexual, married procreation. For married Jews, the biblical command to be fruitful and multiply falls—depending on their affiliation within Judaism and their cultural setting—somewhere on the spectrum between mandate and permission.<sup>15</sup> Thus seeking assistance for infertility falls along the same spectrum. For most Muslims and Hindus, similar convictions hold. For them as for Jews the question is, when does the treatment transgress the boundaries of the marriage or the divine initiative? For Protestant and Roman Catholic Christian marriages, surprisingly, children are hoped for but never mandated theologically; one crucial indication of this is that childlessness is not considered proper grounds for divorce.<sup>16</sup> As a result some

<sup>15</sup> In some opinions the mandate, which is directed to men only, is a command to continue to engage in procreative marital intercourse until the requisite number of children has been born. In this view a man can fulfill it simply by having sex with his wife during her fertile periods, whether or not children result; conception is the goal but is not the measure of obedience. See Bleich (1997a, 147–148).

<sup>16</sup> Paxson reports that Greek Orthodoxy has long permitted divorce for childless couples on the grounds that (1) parenthood is a divinely ordained vocation of marriage; (2) children are born (or not) at God’s will; and (3) it is parenthood, and not merely the marriage liturgy, that cements the permanent bond of marriage. However, this opinion may reflect Greek national pronatalism. One highly revered early Orthodox theologian argued that because immortality is assured, couples need not reproduce in order ensure their own vicarious presence on earth; in marriage it is enough to provide each other spiritual and emotional support and sexual comfort (St. John Chrysostom, 1997, 85–86).



Christian communions (the Roman Catholic in particular) allow little intervention for the infertile. A related distinction may be made between traditions that begin by asking, "What is the (natural) ideal or proper setting for reproduction?" and those that begin with the query, "Who is (naturally) obligated or permitted to reproduce?" In the first case, the originating concern is how and where children can best be born and raised; in the second case, the originating concern is defining and assisting adults in accomplishing their religious vocations. In both cases the originating concern eventually includes the secondary, but it can make a difference where one begins, especially when one contemplates variety in family structure.

The picture becomes even more complex because the cultural and devotional traditions in many places either make childbearing nearly mandatory or declare sex and reproduction to be purely a matter of parental choice; either approach can soften *de facto* or even *de jure* objections to ARTs.

From a Western viewpoint, Buddhism presents perhaps the most intriguing example of "natural" family structure and reproduction. Because all attachments to temporal things—sexual pleasure, child, spouse, or even self—discourage enlightenment, a member of the *sangha* would neither marry nor desire to have children. For spiritually serious people, sex and reproduction are thus suspect on several counts. First, and most obviously, sexual desire and the desire for progeny are particularly vivid instances of attachment and desire and so are unhelpful to one's own spiritual progress.<sup>17</sup> Second, birth—for which sex is a precondition—is ambivalent because, although it provides imperfect souls life (a genuine good) and new opportunities to attain enlightenment, it also reintroduces them to the world of contingency and suffering.<sup>18</sup> In addition, as infertility is thought to be a consequence of sins committed in one's last life,<sup>19</sup> there may be a sense that working to overcome infertility defies spiritual laws in a way that is ultimately injurious, a belief that in turn creates psychological and spiritual barriers to use of ARTs; this reluctance reflects a larger Buddhist predisposition to work with rather than upon or against nature, bolstering an attitude of non-intervention.<sup>20</sup> Finally, the uncritical desire to reproduce in the face of ecosystematic strain contradicts Buddhist responsibility to promote life in its interdependency (Gross, 1997). This complete absence of theological pronatalism throws doubts on the theory that religious people automatically see the "natural" family as a good to be pursued.

Yet Buddhism does not utterly reject worldly life. Buddhist belief in reincarnation assumes that only the purest souls are cut out for the ascetic life, and for this reason although the lay life, marriage, and parenthood fall short of the ideal, they also are not frowned upon. And even the enlightened are believed to be able to

participate fully in the life of sense and relationship without spiritual danger; their sexual fluids may continue to flow even in the absence of a couple relationship, attachment, or desire.<sup>21</sup> Still, Buddhism's failure to prescribe marriage or enjoin childbearing means that only local custom, with its secondary devotional and moral traditions, can create a religious, moral impetus for marriage and a strong connection between marriage and childbearing.

The tradition to which East Asian Buddhists most often look for such moral guidance is Confucianism, which presents an equally ambiguous picture. According to Ren Zong Qiu, the Confucian emphasis on family and communal identity yields a variety of filial piety that commands the continuation of the male ancestral line. The purpose of sex, then, is primarily reproduction; health (preservation of the yin-yang balance in both men and women) and pleasure are secondary and tertiary goods (Qiu, 2002, 76, 78). In addition, patriarchal complementarity rules gender relations; as infertility has traditionally been seen as a woman's problem, infertile wives are, not surprisingly, at risk for divorce. These problems could be alleviated quietly by ARTs. However, Confucianism also erects two significant barriers to ARTs: concern about introduction of extra-familial gametes (this, if the family learns about it, can raise conflicts out of concern for the ancestral line) and the belief that one should avoid donating sperm—both because a man should not harm himself by wasting the vital forces in his sperm, and because sperm stored outside a man's body may lose its vital force and produce a weak or defective child (Qiu, 2002, 78–79). Even disturbing the natural process of conception in general (e.g., AIH) is suspect. But as Qiu succinctly concludes, these suspicions are surmountable: according to Confucianism "disturbing the *dao* of nature is more acceptable than being without an offspring" (Qiu, 2002, 78).

Political pressures also temper Buddhist traditions. In China, many moral arguments about ART implementation center on the future health of the population and the right of parents to reproduce ("Should Surrogate Motherhood Be Banned?", 2001, 28–29); for example, the one-child policy increases parents' desires for a single, healthy, male child, creating a market for methods that increase parents' chances of this outcome.

In the face of this complexity, we might best envision a spectrum of positions, one end of which is held down by Orthodox Judaism, Indian Hinduism, and Middle Eastern Islam, in which marriage and procreation of genetically related children is nearly universal and practically mandatory (for related but not identical reasons), and the other end of which is held down by the less syncretistic strands of the Buddhist tradition, which recommends that childbearing occur within marriage but is not particularly eager to promote either marriage or procreation for its most serious practitioners. Somewhere in the middle might fall Athenian Greek Orthodoxy, most Protestant denominations, and more liberal Jews. Members of many religious communions—notably the Roman Catholic—in fact span the whole spectrum despite being united

<sup>17</sup> Keown (1995, 67, 126); Keown (2005, 55–58); Williams (1991, 101–102); Satha-Anand (2001); Gross (1997, 302–304); Qiu (2002, 75); Fagley (1965, 333–334).

<sup>18</sup> Keown (1995, 66–67, 128); Keown (2005, 54).

<sup>19</sup> Qiu (2002, 77).

<sup>20</sup> Qiu (2002, 78); Lock (1998, 214). But note that compassion, which involves an obligation to reduce suffering, justifies many cases of medical intervention. For exceptions see Keown (1995, 58–64).

<sup>21</sup> Satha-Anand (2001, 120); westerners will find a parallel in Augustine's vision of sex in paradise, not in Plato's account of Socrates' "take it or leave it" attitude toward sexual relationships.

under an apparently univocal official policy, making it important to examine relationships of local belief and practice to religious authority very closely. Although all these traditions agree that moral goodness entails following nature in some sense, they do not agree on whether "nature" mandates, permits, or only tolerates marriage and childbearing. One can imagine a great willingness to use ARTs to fulfill the narrow requirements of family structure at one end of the range and a great degree of flexibility in family configuration, either with or without acceptance of ARTs, at the other.

Some examples may help to illustrate this range. In the Middle Eastern Muslim world, marriage is highly valued, and in most Middle Eastern countries nearly all adults marry if they can. Middle Eastern societies are also pronatalist: they highly value children for numerous reasons and expect all marriages to produce them. Children are usually desired from the beginning of marriage and loved and cherished once they are born. The notion of a married couple living happily without children is unthinkable. In fact Islamic personal status laws consider a wife's barrenness to be a major ground for divorce. As a result, childless couples are often under tremendous social pressure to conceive, and infertile women in particular often live in fear that their marriages will "collapse."<sup>22</sup> Put over-simply, all normal adults marry, in part in order to have children. In this setting, the bond of the marriage actually depends—*de facto* and *de jure*—on fertility; the "natural" act of reproducing legitimizes or ratifies the "natural" union of marriage, and not the reverse. And, as we will see, kinship is biological-genetic; it is normally believed that children must be the direct biological descendants of both parents. These patterns are cemented by Islamic inheritance laws, which stipulate that children can inherit only from their biological (interpreted as genetic) parents. A child of uncertain parentage lacks inheritance rights and therefore the social position from which to launch his or her own marriage and life. Consequently use of homologous ARTs is nearly mandatory for Middle Eastern Muslim women and men in infertile marriages.<sup>23</sup>

Indian Hindu culture is similarly concerned with marriage and procreation, but—as Cromwell Crawford and others point out—for slightly different reasons. First, the āśramas, or traditional ideal stages of life for Hindu men, call for a period of single studenthood followed by marriage and parenting, forest dwelling, and hermitic life. Married parenthood has traditionally been seen as the superior stage, for it not only fulfills a social function but also creates a school of virtue for adults (Crawford, 2003, 16, 116–119). In addition, it produces sons who can carry on the family responsibility to venerate ancestors, delivering their father from hell: "The sonless man was born to no end, and he who does not propagate himself is godless (*adharmika*); for to carry on the blood is the highest duty and virtue" (Crawford,

<sup>22</sup> Although Islam also allows women to divorce if male infertility can be proven, a woman's initiation of divorce continues to be so stigmatizing that women rarely choose this option unless their marriages are truly unbearable.

<sup>23</sup> Sunni communities (the dominant form of Islam, comprising 80–90% of the world's 1.3 billion Muslims (Inhorn, 2006a)) typically permit only AIH and homologous IVF, for all the reasons outlined above. Iranian and Lebanese Shi'a communities are beginning to permit donor procedures under particular conditions; see below.

2003, 116; see also Bharadwaj, 2003, 1869–1870). Finally, it creates an opportunity for souls to reenter the world through reincarnation (Crawford, 2003, 123). Crawford notes that, thanks to its emphasis on begetting, Hinduism weights preserving nature-as-end (procreation) more heavily than preserving nature-as-means (uninterrupted marital intercourse): "It is this end that makes *vivaha* [marriage] obligatory and justifies all *emergency means* to attain that end, including means that would ordinarily be deemed immoral. The morality of such situations resides in the *intention* and *outcome* of the act (progeny), and not in the act (intercourse) itself" (Crawford, 2003, 119). Thus in ancient times *niyoga* (in which a widow or the wife of an infertile man was impregnated by her husband's male relative), and in contemporary times limited use of ARTs, seem less distasteful to most Hindus than the prospect of childlessness (Crawford, 2003, 116–119; see also discussion below).

It is worth noting that in both Arab Muslim and Indian Hindu culture, substantial proportions of couples of child-bearing age (over 60% of infertile couples in one Indian study, for example) live in extended family households (Bharadwaj, 2003, 1869). There is substantial anecdotal evidence that this living situation increases pressures on couples to reproduce and to pursue fertility therapy and (in patrilocal settings) may also make the wife more vulnerable to her husband's family's disfavor and therefore to divorce (Inhorn, 1996). It also makes surreptitious use of third-party gametes or adoption more difficult.

Nearer the center of the spectrum lie official Roman Catholic Church teachings, which in many respects echo Islamic and Hindu positions on the "natural" family but reach somewhat different conclusions. For, in a tradition in which singleness and vowed celibacy have long been considered valid—even superior—vocations, neither marriage nor childbearing is a prerequisite to a faithful adult life, nor is childbearing in theory necessary to a legitimate marriage (though openness to childbearing is).

Roman Catholic statements on assisted reproductive technologies assume a natural law ethical framework. Their explicit appeals to nature function normatively; they are not simply observations about human reproductive experience, but also conclusions about what is inherently important or valuable in human reproduction. In its comprehensive 1987 letter *The Instruction on Respect for Human Life in Its Origin and on The Dignity of Procreation (Donum Vitae)*, the Vatican Congregation for the Doctrine of the Faith invokes a "natural language of the body," which sets the parameters for legitimate reproduction and gives a rationale for the Catholic Church's insistence on the inseparability of sex, reproduction and marriage. Because the most basic ethical question posed by assisted reproduction is whether conception must occur within sexual intercourse, *Donum Vitae's* analysis of various ARTs begins with an assertion about the meaning of human reproduction: "The transmission of human life is entrusted by nature to a personal and conscious act and as such is subject to the all-holy laws of God: immutable and inviolable laws which must be recognized and observed."<sup>24</sup>

<sup>24</sup> Congregation for the Doctrine of the Faith, p. 3, quoting Pope John XXIII (1961, 447).

Several intersecting appeals to nature are at work in *Donum Vitae's* description of sexual reproduction as a human act. First, there is an appeal to the nature of human persons as rational subjects, able and obligated to participate intentionally in God's creative activity through the act of transmitting human life. In addition, there is an appeal to the nature of sexual intercourse as generative as well as capable of expressing intimacy. It refers to sexual intercourse as "most closely uniting husband and wife [and capacitating] them for the generation of new lives, according to laws inscribed in the very being of man and of woman" (Congregation for the Doctrine of the Faith, 1987, 9; reference to Pope Paul VI, 1968, 488–489; emphasis added). Thus the physical union of sexual partners has a "natural generosity" that is normative and material and can never legitimately be subverted. Finally, marriage (assumed to be the permanent union of a man and a woman) is said to be "ordered by its nature" to a dual end: the union of the spouses and the generation of offspring (Congregation for the Doctrine of the Faith, 1987, 9). Here, then, is the argument for the "natural" family. These various appeals come together in the Catholic Church's opposition to barrier, surgical, or pharmacological forms of contraception and any form of assisted reproduction that "replaces the conjugal act": "In order to respect the language of their bodies and their natural generosity, the conjugal union must take place with respect for its openness to procreation; and the procreation of a person must be the fruit and result of married love" (Congregation for the Doctrine of the Faith, 9).<sup>25</sup>

*Donum Vitae's* objections to interventions such as IVF do not turn on concerns that medical assistance renders reproduction *artificial*. The Roman Catholic tradition in general welcomes developments in science and technology as potentially valuable means for human beings to participate in divine activity in the world. Rather, constraints on reproduction take the form of "objective and inalienable properties" of human beings and of sexual intercourse and marriage. Thus, to alter or violate embodied nature in the context of the Roman Catholic moral tradition is to fail to attend to the way things are and ought to be, that is, to the distinctive character of reproduction as a human act set, by God's design, within the enduring and intimate marital partnership. Roman Catholic moral theology founds procreation on marital sexual union, implying that all people are to limit sexual gratification to marital intercourse, that married couples are to be spiritually and emotionally open to parenthood in general, and that they are to leave each act of intercourse physically open to procreation. Conversely, they are forbidden to conceive other than by marital intercourse, although they are welcome to create or expand their families through adoption. Thus the vision of the ideal family is identical to the Sunni Muslim ideal, but the theology behind it both weakens the mandate to procreate and elevates the link between sexual relations and procreation, making it difficult to justify use of ARTs. In practice, however, many infertile Roman Catholic couples depart from this reasoning; valuing procreation and parenting more highly than avoidance of artificial means, they quietly pursue ARTs.

<sup>25</sup> Congregation for the Doctrine of the Faith, 9. The possible exception is GIFT performed after sexual relations in which a perforated condom has been used. On the arguments of the foregoing two paragraphs, see also Lauritzen (1993, 6).

The Greek Orthodox Church, part of the worldwide Orthodox Christian communion, proceeds on similar premises but accepts limited use of ARTs because its understanding of the relationship between intercourse and procreation diverges from the Roman Catholic view at two key points. The Greek Orthodox Church recognizes four purposes of marriage: (1) the birth and care of children; (2) the mutual aid of the couple; (3) satisfaction of the sexual drive; and (4) growth in mutuality and oneness, i.e., love (Harakas, 1980). According to the Orthodox Church in America, although "the procreation of children in marriage is...a blessing of God...[and] the natural result of the act of sexual intercourse in marriage," sexual relations and conception may be separated: "married couples may use medical means to enhance conception of their common children" if they use their own gametes and avoid procedures that result in the destruction of embryos (Orthodox Church in America, 1992, confirmed in Sheean, 2004). Children resulting from AIH are still products of the "one flesh" joined by God through marriage. The concern with AID and one of the concerns with surrogacy are not lineage (adopted children are welcomed) but the adulterous involvement of a third party in what is normally an intimate marital act. Furthermore—again in departure from the Roman Catholic view—the prohibition against masturbation can be lifted in the interest of obtaining a semen sample for AIH. A forbidden "unnatural" act becomes tolerated in the greater interest of procreation, a "natural" desirable outcome of marriage. This reasoning is consistent with the Greek Orthodox Church's principle of *ekonomia*, which accepts a minor wrongdoing committed in the process of realizing God's plan for salvation of the world.<sup>26</sup>

Toward the other end of the spectrum we find, among others, most Protestants. Here the question of "nature" might be regarded as a concern not about inheritance or genetic connection but discerning the criteria that make the "natural" family a typically superior environment for raising children and protecting the dignity of children who are conceived. First, although when Protestant denominations make statements on assisted reproduction they rarely treat the connections between genetic relation and parenthood as absolute values, marriage typically functions as the "fitting" or "faithful" setting for procreation and thus as the ideal against which alternatives are to be judged. Second, Protestant denominational statements on assisted reproduction sometimes invoke the distinction popularized by Gilbert Meilaender between "begetting" and "making" a child (Meilaender, 1997; see also O'Donovan, 1984). Drawn from creedal descriptions of the relationship between the aspects of God as Creator and as Redeemer, the image of the child as "begotten" suggests divine agency: "When a new human life—which can be regarded as the 'created word' of the living God—comes to be through the marital act it is in truth 'begotten, not made,' just as God's eternal and uncreated Word, who became man (a 'created word') for our sake... 'begotten, not made'" (May, online). "Made," in contrast, suggests the relationship of a human agent to a product, i.e., a relationship of alienation, subordination, and instrumentalization. The extreme, cloning, is often

<sup>26</sup> On *ekonomia* see for example Paxson (2004, 61).

presented as the culmination of the technological transformation of procreation into reproduction (of begetting into making): here natural humanity itself is treated as a raw material for "constructing a form of life that is *not* natural humanity but is an artificial development *out of* humanity" (Campbell, 1997, D13, quoting O'Donovan, 1984, 16; italics in original).

The distinction between "begetting" and "making" provides a helpful lens for describing uses of "nature" in Protestant analyses of reproductive technologies. Because Protestant ethics looks to the Bible for moral guidance, we do not often find appeals to normative patterns of existence or "the laws of nature." Indeed, "nature" is frequently used to describe the state of humankind as "unredeemed," analogous to "the flesh" as contrasted with "the Spirit." 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. In the hands of conservative interpreters, this yields an interpretation very similar to the Roman Catholic one: Hebrew Bible dicta and models of family life are taken as the permanent norms, modified by New Testament mandates for monogamous marriage.<sup>27</sup> In the hands of more liberal interpreters, the rationales for biblical models of family life understood within their historical and cultural contexts carry more weight than the models themselves. So, for instance, a fertile heterosexual marriage might be seen as "naturally ideal" not in itself but *because* it combines factors ideal for a non-instrumental view of children and for children's flourishing: loving sexual reproduction, the emotional and financial security of a two-adult household, the intimate presence of both male and female adults, the long-term commitment of marriage, and religious, social, and political approbation (Waters, 2001). From this perspective fulfilling as many of these criteria as possible, and not simply living within the institution that usually produces them, is what makes a household worthy of children. Contemporary Greek Orthodox women often employ a similar criterion: do ARTs like IVF enable "proper parenting" (Paxson, 2004)? These kinds of reasoning can open the door to carefully considered ART use by married couples, intentionally single parenthood, and parenthood by committed gay and lesbian partners.

These examples show that although the vision of the "natural" family—including fertile, married heterosexual parents and their children—may be virtually universal, its significance for the "naturalness" of ARTs cannot be understood except in the context of a particular religious tradition as it unfolds in a concrete cultural setting. Indeed, as we have seen with Buddhism and Roman Catholicism, the "natural" family may not even be seen as the only or the ideal context for a holy life.

Finally, it is important to recognize that accepting infertility, either after or without infertility treatment, can lead couples through a crisis of identity to a change in their own religious understandings of "natural" marriage and family. Maura Ryan notes that if they are to lead healthy, well-rounded lives, infertile American Roman

<sup>27</sup> For a useful recent statement, see "The Natural Family: A Manifesto," available at <http://www.sutherlandinstitute.org/images/FamilyManifesto.pdf> (accessed July 6, 2006).

Catholic couples must divest themselves of a culturally Catholic expectation (a marriage must produce children and is meaningless without them) and adopt something closer to the official Church teaching on family (a married couple must be open to children but must practice hospitality and generosity in other ways if they are not forthcoming) (Ryan, 2001, 58–60). Marcia Inhorn reports that in Egypt and Lebanon, Muslim men in long infertile marriages tend not to avail themselves of their legal opportunities to divorce and remarry or to take second wives; implicitly, these men and their wives give up the traditional Muslim ideal of a procreative union for a companionate vision of marriage in which their intimacy, love, and fidelity alone, not offspring, justify their continued union (Inhorn, 2006a).

### 1.2.3.2 Third-Party Donation

As the foregoing discussion suggests, different religious and cultural groups regard various moments and processes as normatively natural, leading to divergent evaluations of their acceptability. One telling sticking point is third-party donation. For example, when they have addressed the question of assisted reproduction, both mainline and conservative Protestant communities have in general found separating procreation from sexual union acceptable *for the sake of marital reproduction*.<sup>28</sup> Likewise, on criteria of promoting life and providing opportunities for rebirth (after all, no child can be born unless there is a soul awaiting rebirth), Keown surmises that AIH might be acceptable to Buddhists.<sup>29</sup> Thus interventions such as artificial insemination and in vitro fertilization, which use a married couple's own gametes, are more widely acceptable. Donor methods, which risk severing what is often seen as a divinely-willed connection between a married couple and their offspring, are more controversial.

Even if the concern is unanimous, the reasons given are varied, revealing further differences in groups' varied understandings of nature. For some the question of nature and third-party donation is purely and simply a question of *physical genetic identity*: have both parents put their genetic stamp upon the child?<sup>30</sup> If not, the connection between the non-genetically-contributing parent and the child is compromised, even if (for example) a woman who conceives with donor ova then gestates and raises the child. In some cases the argument is that non-genetically-related parents cannot feel adequately devoted to children to form proper bonds with them; in other cases it is that the child's behavioral, emotional, and intellectual patterns will be hard for its parent to comprehend and support; in still others it is the idea that

<sup>28</sup> American Protestant denominations holding this position include, among others, the United Methodist Church, the Evangelical Lutheran Church in America, the Episcopal Church, the Presbyterian Church (U.S.A.) and the United Church of Christ.

<sup>29</sup> Keown (1995, 135–136).

<sup>30</sup> Marilyn Strathern calls this the replacement of social relationships with biological or genetic relationships. See Strathern (1992a, 52–53, 178).

immortality is not eternal life but self-perpetuation through genetic temporal reproduction (see for example Lock and Kaufert, 1998; Kass, 2002, 153–157). Interestingly, although some religious communities place great value on homologous fertilization, the people most likely to phrase the question of third-party donation in these ways are biological determinists. Max Charlesworth has pointed out that such extreme reductionism is unsupported by experience and ultimately breaks down logically (Charlesworth, 1990). Yet a similar reductionism plays a secondary role in many religious distinctions between homologous methods and third-party donation: “It does not feel ‘natural’ because it is not ‘mine.’” Usually, however, the religious acceptability of third-party donation has more to do with religious ideals of family structure and of the connection between marriage and procreation than with simple material, genetic identity.

The more common religious objections to third-party gamete donation for married couples interestingly have little to do with biological provenance.<sup>31</sup> This is due in part to wide acceptance of adoption (a discussion of the Muslim and Hindu exceptions follows below): a child whose planning, conception, and birth were carried out by one set of parents is then taken by unrelated parents to raise as their own—presumably with the hope of bettering the child’s situation.<sup>32</sup> As a result, a devotion to the idea that biological relatedness is essential to “real” parenthood cannot be the whole source of discomfort. Instead, religious objections are due in part to the belief that the use of donor gametes differs from adoption in an important way: it introduces a third (and perhaps even fourth) party into the *intentional process of fertilization and conception*, constituting a form of adultery. Even within this view there are variations. Some Roman Catholics, Greek Orthodox Christians, and Anglicans see adultery as a breach of marital fidelity: an emotional and spiritual wedge between husband and wife both symbolized by and enacted in sexual infidelity. They argue that introducing a third party into the process, as well as replacing loving intercourse with masturbation and surgical procedures, will necessarily or likely (depending on the strength of the objection) erode marital unity in the same way that an affair would (Brody, 1990, 54–56). Some of these thinkers accept some homologous procedures, arguing that they give the same result as naturally occurring sexual intercourse without interfering with the “sacred union through

<sup>31</sup> Clearly gay and lesbian couples must accept third party donation.

<sup>32</sup> Paul Lauritzen points out that contemporary adoption is increasingly (among other things) a consumer industry driven by the demand for healthy, white newborns and dominated by private agencies. As a result the distinction between surrogacy as a commercial, consumer transaction and adoption as an act of benevolence toward the child is eroding. See Lauritzen (1993, 119–134). Maura Ryan adds that unhappily infertile couples may make poor adoptive parents and that suggesting adoption as the “cure” for infertility not only shifts the burden for the care of needy children to the involuntarily childless but distracts our attention from the social and economic problems that cause parents to give their children up for adoption (Ryan, 2001, 56–60). Gay Becker notes that adoptive parents of infants often have initial feelings of strangeness and alienation that evaporate on acquaintance with their adoptive child or even, in some cases, with its gestational mother before its birth (Becker, 2000, 197).

which God Himself joins the two together into ‘one flesh’” in marriage. Children resulting from AIH are still products of this “one flesh” (Breck, 1998, 182, see also 177). Dissenters within these traditions tend to argue a similar point, but in favor of homologous and even donor procedures: rather than being vilified by a chosen fertility procedure, the larger context of a sacred, grace-filled, loving companionate marriage sanctifies the procedure, for its higher purpose is perfectly in line with the relationship even if its aesthetics leave something to be desired.<sup>33</sup> For Jehovah’s Witnesses the official problem is simply a transgression of Hebrew Bible dicta against transferring one man’s semen to another’s wife (Lev. 18:20, 29; see Brody, 1990, 54–56).

For many Muslims and Jews, as well as Confucian Asians, the adulterous implications of third-party donation arise not primarily from jeopardizing companionate marriage but from muddying blood lines. In China, where patriarchal descent is of utmost importance, women seem more willing to accept donor eggs than donor sperm; however, the latter hesitation is sometimes mitigated by a belief that donor sperm are of the highest quality and will produce the healthiest, most intelligent children—a consideration that looms large when a couple is limited to one or two offspring (Handwerker, 2002, 306–310).

Particularly for observant Jews, a convergence of several factors both strictly limits and provides fascinating openings for third-party donation. First, unlike Roman Catholic moral theology, Jewish law does not regard itself as a universal moral code but applies in particular to the Jewish people as a consequence of their divine covenant. One might assume that a community placing such a high value on belonging would shun use of outside donor gametes, and indeed the halakhic problems caused by donor ova are complex (see, e.g., Bleich, 1997b, c; Bick, 1997). But Susan Kahn’s work on Orthodox Jewish attitudes to ARTs shows that the opposite is sometimes the case. For example, in cases of severe male-factor infertility, when there are no other options, some rabbis permit the use of sperm donated by a third party. This solution has been the topic of contentious debate in the rabbinic world, but all rabbis agree that if a third-party donor is used, he should be a non-Jew. The reason for this preference is that the child conceived in this way will still be Jewish, as Jewishness is transmitted through the matriline (Kahn, 2000, 85), and—in addition—using donor sperm from a non-Jewish donor circumvents three otherwise severe Halakhic obstacles to sperm donation. The first is adultery. According to Jewish law, adultery is a sexual relationship between a married Jewish woman and a Jewish man other than her husband. Thus, a child conceived with non-Jewish donor sperm would not be considered the product of an adulterous union.<sup>34</sup> The

<sup>33</sup> Richard A. McCormick is one representative of this style of thought, with respect both to ARTs and to contraception. For examples of such reasoning in his work, see McCormick (1987, 1989). Lisa Sowle Cahill has embraced a variation of this approach in her work; see for example Cahill (1996). As we will see below, a concession like this is not always a *carte blanche*. The elasticity it creates might be nearly infinite or might simply extend to homologous procedures not involving IVF.

<sup>34</sup> Most Israeli ultraorthodox rabbis agree that non-Jewish donor sperm are an acceptable solution to male infertility (Kahn, 2002, 290).



second is masturbation. Jewish law generally prohibits masturbation, but masturbation by non-Jews is not an explicit halakhic concern (Kahn, 2000, 104).<sup>35</sup> The third is incest. Given the relatively small size of the Jewish population, the use of anonymous Jewish donor sperm creates the potential for incestuous unions between unknowingly halakhically-related men and women; the use of non-Jewish donor sperm avoids this obstacle, as the children of two unrelated Jewish women conceived with the same Gentile sperm are considered unrelated for purposes of marriage (Kahn, 2000, 105).<sup>36</sup>

These laws contain loopholes that in theory permit formerly unimaginable possibilities: use of donor sperm to accomplish halakhically pure, intentionally single motherhood.<sup>37</sup> Likewise, an unmarried Jewish woman may provide an ovum to a married Jewish couple without involving the donor or the husband in adultery or jeopardizing the Jewish origin of the child to be born, no matter whether rabbis eventually rule that ovum source or gestation is the criterion of Jewish heritage (Kahn, 2000, 129).<sup>38</sup> Kahn cautions that these judgments, vigorously debated by Orthodox rabbis (Kahn, 2000, 106–107; see also Rosenfeld, 1997; Bleich, 1997b, c; Bick, 1997), are by no means universally accepted, and that “among religiously observant Jews...the nuclear family is still largely understood as the only appropriate framework for reproduction” (Kahn, 2000, 59). However, the existence of some lenient rabbis—not to mention the indifference of some Jews to rabbinic rulings—provides space for limited experimentation at these frontiers.

In Sunni Islamic cultures, as we have seen, what is at stake is not simply Muslim identity but biological inheritance. Islam can be said to privilege, even mandate, both procreation and biological inheritance, which are expressed not in the Western medical language of “genes” and “heredity,” but rather in kinship idioms of “lineage” and “relations.” The first paragraph of the influential Al-Azhar *fatwa*<sup>39</sup> on assisted reproduction begins, “Lineage and relationship[s] of marriage are graces of Allah to mankind” and ends, “Therefore, origin preservation is a most essential

<sup>35</sup> Opinions on masturbation are not unanimous; it is sometimes considered acceptable if the broad purpose is reproductive. See for example Jakobovits (1994, 58–66; 1997, 115–138).

<sup>36</sup> Kahn notes that secular, single Jewish women in particular are concerned about genetic incest and sometimes plan to ensure that their children do not mistakenly marry biological half-siblings (2000, 78–80). See also Kahn (2006).

<sup>37</sup> Kahn notes that “unmarried religiously observant women are availing themselves of the opportunity to conceive children via reproductive technology...in significantly smaller numbers than their secular counterparts and with greater attention to Halakhic concerns” (Kahn, 2000, 59). One analogy that opens the door to this possibility is bathhouse insemination (a woman’s impregnation by the sperm of a man who ejaculated in the waters of a public bath), proposed in halakhic debates as a means by which a woman might become pregnant while remaining a virgin. See Reichman (1997).

<sup>38</sup> Kahn notes that married, infertile Jewish couples’ demand for donor ova is one force driving a growing acceptance of use of ARTs by Jewish straight single women and lesbians, whose ova—by Israeli law—cannot be donated to other women unless the donors themselves are undergoing fertility treatment (Kahn, 2000, 132–133). This is one clear example of pragmatism altering common ideas of acceptability and “naturalness” in unexpected ways.

<sup>39</sup> See the appendix to Marcia C. Inhorn (2003, 275–279).

objective of Islamic law.” The tie by *nasab* (lineage, or relations by blood) is considered to be one of God’s great gifts to his worshippers; thus, knowledge and strict preservation of *nasab* is morally imperative for Muslims. The problem with third-party donation is that it destroys a child’s *nasab*, which is not only immoral but also psychologically devastating to the child. In addition, Muslims believe that parents who see their child as an *ibn haram* (literally, son of sin)—as “illegal,” unnatural, and stigmatized—will never treat him or her with the love and concern parents feel for their “real,” natural children. Consequently only artificial insemination or IVF with the husband’s semen is allowed in the Sunni Muslim world. Beyond the knowledge that third-party donation is forbidden, fear of lab mix-ups and anxiety over gamete origins also discourage Muslim women from using heterologous (or donor) ART procedures (Inhorn, 1994, 338–339; 2003a).

In addition, although third-party donation involves neither the sexual body contact of adulterous relations nor presumably the desire to engage in an extramarital affair, Sunni religious scholars consider it to be a form of adultery. It is the fact that another man’s sperm or another woman’s eggs enter the sacred dyad that makes donation of any kind inherently wrong and threatens the marital bond. Finally, sperm donation raises the specter of unintentional incest among a man’s unsuspecting offspring.

These objections to donor procedures cannot be rescued by analogy with adoption. Muslims, for example, are so wary of third-party involvement and uncertain genetic heritage that western-style adoption is unknown in Sunni countries, practiced only—and rarely—in Shi’a Iran and covertly in other Middle Eastern countries (Sonbol, 1995, 60). Yet Muslim belief and practice are no more monolithic than those of other traditions. As we will show below, leaders of Shi’a communities in Iran are working within traditional Muslim notions of inheritance, adultery, and family to create new mechanisms for third-party gamete donation on Islamic terms. On the other hand, Heather Paxson notes that Greek women see even IVF as more “natural” and acceptable than adoption (Paxson, 2006, 5–6), perhaps because they retain gestational connection to their children.

In some cases the cultural and religious demand for marital fertility is so high that even where the public standard for married couples is homologous fertilization, donor gametes are widely but quietly used. In India, cultural taboos on adoption and third-party gamete donation are so strong that many couples secretly using donor gametes pull their doctors into a conspiratorial public claim that their “miracle baby” has been born of their own gametes (Bharadwaj, 2003).

### 1.2.3.3 Surrogacy

In most cases surrogacy overcomes some of the objections to third-party gametes but fails to solve the difficulties posed by separating sex and procreation, and it introduces a new difficulty: a nine-month rather than nine-minute commitment on the part of the donor. In surrogacy, a hopeful parent or parents contract with a woman to conceive and bear a child, if possible using gametes from one or both



parents-to-be, who then pursue whatever civil legal process their nation requires in order to be recognized as the child's parents. Religious people—both hopeful couples and surrogates—who accept surrogacy in fact tend to justify it by arguing *against* the hypothesis that we have been developing: that genetic relationship is inessential to parent-child kinship. For instance, when there is no female partner, or she has no viable uterus, parents-to-be often pursue surrogacy rather than adoption because they want a genetically related child. Surrogates often take the same view. Helena Ragoné argues that American surrogates typically are morally and emotionally offended by the idea of contracting to give up their "own" children to others; consequently they prefer not to contribute their own ova when they serve as surrogates (Ragoné, 1998, 120–123).<sup>40</sup>

Israeli surrogacy law and practice preserve the parental genetic link as closely as possible (Kahn, 2000, 152–158). The law insists that sperm be taken from the father-to-be and that ova not be taken from the surrogate. In addition—contravening<sup>41</sup> traditional Jewish law—once born, the child is not considered its birth mother's offspring, and within a week of the child's birth formal proceedings to declare the contracting couple the child's parents must begin, even if the contracting parents neglect to do so themselves. Despite this irregularity, every effort is made to preserve halakhic purity: if the contracting couple is Jewish, so must be the surrogate—and except in unusual circumstances, she must also be single (Kahn, 2000, 140–148).

Members of other traditions disapprove of surrogacy for much the same reasons they reject the use of third-party gametes: Roman Catholics, most Muslims, and Orthodox Christians fall into this class. The most influential Sunni fatwa on assisted conception argues that any intrusion by third parties into "the marital functions of sex and procreation," whether through "providing sperm, eggs, embryos, or a uterus... is tantamount to *zina*, or adultery." Consequently "all forms of surrogacy are forbidden."<sup>42</sup> Surrogacy is frowned upon in Greek Orthodox circles as well, but not always or only because of third-party gamete or uterine intrusion; in Greece, for instance, where cultural understandings of motherhood tie mother-child kinship to full-term gestation and birth, both adoption and surrogacy (rejecting motherhood by "giving one's child away") are rare (Paxson, 2004, 221–222)—even though at least half of all Greek pregnancies end in abortion (Paxson, 2004, 163). A number of the same religious communities argue that commercialization and exploitation are inappropriate to procreation; even the Israeli law that permits controlled surrogacy strictly limits the compensation that may be paid to the surrogate (Kahn, 2000, 151–152).

<sup>40</sup> Ragoné notes that a surrogate for whom IVF is repeatedly unsuccessful sometimes consents to AI but must consciously alter her operative understanding of her role and of kinship in order to do so (1998, 124–125).

<sup>41</sup> Rabbis are still debating cases of surrogacy and egg donation, but the default position is that the birth mother is the halakhic mother. See Rosenfeld (1997); Bleich (1997b, c); Bick (1997).

<sup>42</sup> Inhorn (2003c, 97), commenting on the *fatwa* reproduced on pp. 275–279. See also Inhorn (2005).

Absent from nearly all the religious treatments—mainly because few traditions are prepared to consider the possibility of gay and lesbian parenting—is any discussion of gay couples' use of surrogates, but presumably the motive would be the same: the possibility of raising a genetically related newborn.

In sum, then, the willingness of any tradition to contemplate third party involvement through gamete donation, surrogacy, or adoption depends upon what dimensions of nature its practitioners believe the procreative process must guard as sacred. Genetic relation, gestation and birth, the unity of exclusive sexual relations with procreation, and ritual or communal purity all have their roles to play, at times with unexpected results. As we will see below, local cultural expectations for gender roles and for marriage and singleness also have their say.

### 1.2.3.4 Unused Embryos

A very different—and to many religious communions ultimately more important—objection to ARTs is that procedures beyond AI and GIFT, as practiced today, require the fertilization of more ova than they use. Depending on the laws of a nation and the practices of a particular clinic, unused embryos may be donated; destroyed; used for research; or frozen (cryopreserved) for possible future use by the same parents. The question for religious communities is whether each option is acceptable, and why. Responses to these concerns depend on several factors: whether fertilization constitutes the beginning of an ensouled human life that must be provided an opportunity for gestation; if so, whether statistical "natural" embryo wastage nonetheless permits one some latitude in ART procedures; whether there are parallel cases in which destruction of human life is morally acceptable; and, whether or not embryos are ensouled at fertilization, at what point along their developmental continuum they "naturally" possess a degree of dignity that obligates people to protect them. Finally, in some traditions the question of the embryo's status may not really be about the embryo simply but about the embryo in relation to the parent's sense of vocation.

It is not possible to explore all of these questions here, but two examples illustrate how important it is to proceed carefully when analyzing both positions and practices. The Greek Orthodox Church, which teaches that human life begins at fertilization, generally condemns the production and destruction of unused embryos. According to Nikolaos Hatzinikolaou, the natural process of fertilization is "sacred and secret" (Hatzinikolaou, 1996, 104). Part of what makes it sacred is that two cells unite to become something new and irreversible, a person with a specific identity. Thus fertilization marks not only the beginning of life but also the birth of the soul. In the sacred process of fertilization nature creates a spiritual being that in turn "functions beyond the laws of nature" (Hatzinikolaou, 1996, 105). Through divine design and assistance, biological nature transcends itself.

The corollary of this argument is that the progress of post-fertilization embryonic development research is morally irrelevant to the question of the embryo's nature and status. According to Breck, definitive embryological determinations

regarding differentiation “would not alter the Orthodox [Christian] conviction that human life begins with conception, meaning fertilization”; he adds that “the undeniable evidence [is] that a unique human ‘soul,’ the divinely bestowed dynamic of animation, is present from the very beginning, when the pronuclei of sperm and oocyte fuse to form the zygote” (Breck, 1998, 143).<sup>43</sup>

For Breck, this affirmation nevertheless opens up the possibility for Orthodox Christians to consider IVF or ZIFT if no extra embryos are created, no fetal reduction occurs, and any extra embryos that might unexpectedly be produced in certain circumstances are “donated” to infertile couples who would then “adopt” the embryos (Breck, 1998, 187–188). The notion of adoption (which makes perfect sense, given that the embryos are regarded as very young human beings) avoids the prohibition against introducing third (and fourth) parties into the procreative process, naturalizing an otherwise illicit act—adultery—by transforming it into a licit one—adoption. The unexpected result—accepted by the Greek Orthodox Church—is an all or none scenario: either both parents must be genetically linked to the embryo/fetus/child, or neither can be. This is a wonderful example of the importance of the choice of central concern, the value that defines “naturalness” in a given analysis. In this case, because the concern is the fate of existing unused embryos, the focus shifts to embryo-as-person, and the worry about adultery no longer applies.<sup>44</sup>

Unsurprisingly, the Eastern Orthodox debate over the state of the embryo in IVF is linked to the debate over abortion. According to Heather Paxson, in Greece the Orthodox Church and the pronatalist New Democracy Party condemn abortion as

<sup>43</sup> See also Breck (2003, 22–24).

Breck discusses the debate surrounding when conception begins and whether or not fertilization and conception are coterminous. Some Christian ethicists follow British embryologists who differentiate between embryos and “pre-embryos,” which would be defined as the entity which exists from the single-cell zygote stage until formation of the primitive streak and implantation in the uterine wall (Breck, 1998, 127–143). Conception becomes a process rather than a moment (fertilization), which takes approximately 12–14 days, at which time the embryo would have a soul. Under this scenario, very early pregnancy termination, IVF, and early embryo experimentation (before ensoulment) would be permissible.

Breck offers an embryological description that would undo this notion of the “pre-embryo.” The key difference in all of these scenarios is the point at which the embryo becomes a differentiated body of cells rather than a mass of undifferentiated totipotent cells. “Differentiation,” “singularity,” and “biological stability” are all varying prerequisites for ensoulment. Here much is at stake: various forms of ARTs, abortion, embryonic experimentation, etc. In this case theologians appear not only to have to accommodate evolving information about nature (for example, by accepting AIH but forbidding AID and IVF because they violate nonnegotiable religious boundaries like adultery, or murder in the case of fetal reduction) but they also seem to base the morally crucial timing of ensoulment on unstable, evolving biological knowledge.

<sup>44</sup> The alternative would be to argue that no process that produces unused embryos should be used, but apparently—for Breck—the value of gestation and birth is high enough to permit the disengagement of sex from conception and even to permit the production of extra embryos that will have gestational homes. This is not surprising, given that Paxson argues that Athenian women consider motherhood to be defined by gestation and birth, not genetic relation (Paxson, 2004, 221–222).

the killing of a human soul (Paxson, 2004, 185–187), but the government and ordinary Greeks see legalized abortion as a sensible acknowledgement of the social reality of unplanned pregnancy (Paxson, 2004, 188–189) and as an improvement over infanticide (Paxson, 2004, 246). Urban Greek women’s willingness to make use of abortion places them on the latter side of the debate. But we should not assume from this that they see embryos as “not persons.” Rather, as Paxson and Georges suggest, these women may see abortions as applications of *ekonomia*, the principle that allows religious law to be excepted or selectively applied in imperfect situations in the service of a greater good. In the case of abortion, being a good mother either now or eventually may require aborting the ensouled fetus that has resulted from carelessness or misfortune.<sup>45</sup> Likewise, one can imagine Athenian Greek Orthodox women regretfully resisting Church teaching on ARTs by employing a traditional method of Orthodox reasoning: accepting the inevitable deaths of extra embryos—again, seen as persons or potential persons—as part of the imperfect process that enables them to realize virtuous motherhood.<sup>46</sup>

Both conservative and liberal Roman Catholics have a hard time making a similar argument, as both the Vatican and the progressive wing of the Roman Catholic Church have grown decidedly pacifist, rejecting arguments that traditionally justified killing in limited circumstances. On this logic, if the embryo is a person, one must preserve it; intentional embryo wastage would make moral sense only if embryos were not ensouled.<sup>47</sup>

Buddhist teaching and practice diverge in some of the same ways as Greek teaching and practice, and more starkly. According to Buddhist tradition animation or ensoulment can occur as early as fertilization; but even if it does not, a particular embryo may simply be on the verge of receiving a soul. Thus, on the grounds of Buddhism’s first precept, which forbids killing another living being, it is difficult to argue for the acceptability of embryo research, cryopreservation of embryos, and the intentional destruction of embryos in IVF.<sup>48</sup> In addition, if one embodied soul is good, more are not necessarily better. Western Buddhist author Rita Gross cautions that compassion for souls awaiting rebirth cannot legitimately be turned to pronatalist purposes: an overcrowded world will work against their enlightenment, not for it, as deprivation is a barrier to spiritual growth.<sup>49</sup> As we have seen, however, fertility practice in Buddhist-influenced Asian nations is also formed by population policy,

<sup>45</sup> On abortion and *ekonomia*, see Paxson (2004, 61) and Georges (1996).

<sup>46</sup> See Georges (1996, 515). This is not to say that all Greeks see embryos and fetuses as fully invested with personhood—only to say that Greek Orthodox theology has a method by which it can accommodate loss of embryos in IVF and in abortion even if they are so invested. On the indeterminate status of the embryo and fetus in the Greek civil debate see Paxson (2004, ch. 5).

<sup>47</sup> Another argument that might be marshaled is the distinction between killing and letting die, which is often made in end-of-life issues. The argument that wasting embryos imitates “natural” processes would be problematic for a similar reason: it involves willfully choosing death for some embryos rather than simply accepting the results of a biological process.

<sup>48</sup> Keown (1995, 121–122, 135–138).

<sup>49</sup> Gross (1997, 292–301).

local family structure, and other devotional traditions, which can lead both to abortion and to combining PGD with ARTs, in both cases often for sex selection.<sup>50</sup>

The combination of two questions—the status of the embryo, and conditions under which killing an embryo is morally acceptable, whether or not it is seen as a person—has implications for the question of what to do with stockpiled embryos. According to Charis Thompson, a 2003 national survey of frozen embryos showed that

almost 90% of frozen embryos are intended to be used by the couples from whose gametes they were derived—to use if the fresh cycle of treatment does not work or if they want to have another child at a later date. Of the approximately 4% of frozen embryos available for donation, it is estimated that 11,000 are destined for research and 9,000 for other couples. Approximately 9,000 are currently destined to be thawed without use. “Abandoned” embryos—which are unclaimed after a period of years and after diligent efforts have been made to contact the couple involved—are not used for research or donation.<sup>51</sup>

For many Greek Orthodox, Roman Catholic, and Buddhist ethicists, these statistics are simply a further argument against extra-uterine methods of fertilization. Religious women and couples in fertility treatment, however, do not always pause to consider the implications of their choices of method as their involvement and investment in the process deepen.

Finally, distaste for a strong vision of embryonic human nature actually drives some infertile couples away from ARTs. Charis Thompson recounts the story of one couple who, on learning that evangelical Christians would consider the use of a donated embryo an “adoption,” refused the procedure in order to avoid appearing to support this religious view of “natural” embryo rights.<sup>52</sup>

Thus for many communions the question of the embryo’s status—or nature—and the demands that follow from it are fundamental to the evaluation of particular ARTs. Even a communion like the Greek Orthodox Church, which has an elastic view of the connection between sex and procreation within a marriage, draws the line at embryonic life.

### 1.2.3.5 Gender and Gender Roles

As we have noted, infertility and fertility treatment most often reinforce traditional family patterns and gender roles. For example, ARTs can be used in support of the status quo to continue an existing identification of femininity and motherhood (when used quietly by couples who are infertile, and either ignored or tacitly permitted by religious authority) or to create or strengthen such an identification where

<sup>50</sup> Normally when East and South Asian parents select for gender, they select for males; however, in Japan, where many women anticipate that daughters will care better for them in old age, there is some indication of preference for girls (Mori and Watanabe, 2002, 422).

<sup>51</sup> Thompson (2005, 4).

<sup>52</sup> Thompson (2005, 220–221).

none was previously ascendant (when recommended publicly as a way of fulfilling a gender-linked obligation). Now that male infertility is diagnosable, ARTs might also create or reinforce an identification of maleness with virility and fatherhood. Finally, ARTs might create or magnify the idea of marriage as an institution intended chiefly for begetting and raising children in communities where this norm formerly was absent or was only a sub-theme.

Gender may be the place where a sense of personal identity intersects most powerfully with legal, social, and economic forces. Hence it is important to realize that no discussion of men’s and women’s private struggles with identity and worth can be undertaken in isolation from a discussion of the larger patterns and stakes that create the standards to which they hold themselves. Distinctions are possible, but the two dimensions of the question are interdependent.

As we noted above, the experience of infertility and of fertility treatment often leads to a crisis of gender identity. Gay Becker argues that infertile men and women tend to fall back on quite traditional, even stereotypical and essentialist, descriptions of masculine virility and feminine fertility and maternity in order to explain their sense of frustration and suffering. Those who remain infertile must consciously remake their gender definitions in order to be able to accept their childlessness (Becker, 2000, 28–29).<sup>53</sup> It would not be surprising if, conversely, those who conceived subsequently retained these newly rigidified understandings and passed them on to their offspring. Clearly, when one hears religious language about masculine and feminine “nature,” one must approach it critically, with an eye to what may be at stake. Most of the work being produced on this topic focuses on women, but more recently researchers have begun to address men as well (see, e.g., Inhorn, 2002, 2003b, 2004).

Although in Euro-American cultures infertility chiefly damages people’s senses of themselves as gendered beings, in other cultures larger issues are at stake. We will give three examples of infertility’s implications for femininity: moral, socio-economic, and political. Orthodox Christianity in Greece provides a moral and vocational argument for ARTs. The belief in the nature of women as bearers of children is particularly evident in a passage by Greek Orthodox author Hatzinikolaou: “During pregnancy, women experience the peak of their humanness, for the basic function of the female body, towards which the whole female nature and life is directed, is the reproductive one. Women exist as they are anatomically, physiologically and psychologically for the embryo and pregnancy” (Hatzinikolaou, 1996, 104). It could be argued then that ARTs that do not violate Orthodox principles can enable women to reach their full humanity. In other words, “women must conceive and reproduce in order to be ‘real’ women” (Lock and Kaufert, 1998, 20), and up to a point, they may use ARTs in order to execute this sacred project. Thus many Greek women regard ARTs as working *with* nature—enabling women to become themselves—rather than after or against nature (Paxson, 2004, 213–219; 2006).

<sup>53</sup> On adoption of exaggerated stereotypical gender identities during treatment see also Thompson (2002, 52, 65).

As Heather Paxson points out, however, modern Greek Orthodox women paint themselves a picture of womanhood that entails much more than maternity, or—perhaps more accurately—they create a vision of maternity that includes much more than childbearing. In Greek Orthodoxy, as in Roman Catholicism, the project of life is to become what one is: to develop the virtues appropriate to and even dormant in one's nature. For the Greek Orthodox, this implies the belief that there are specific masculine and feminine virtues. As Paxson notes, "Motherhood completes a woman in Greece not because it actualizes some essentially female biological capacity but because, by demonstrating they can be good mothers, women assert their proficiency at being good *at being* women and at being *good* women—and they fulfill their part of a [*sic*] unwritten contract of social reproduction" (Paxson, 2004, 18). One of the defining virtues for women is maternity, which includes service, self-control, generosity, foresight, and responsibility. Because a virtuous mother is one who plans carefully and well, she refuses to bear children whom she cannot raise. Thus "good mothering" can include the choice to have an abortion or (especially if one is poor or unmarried) not to bear children at all, instead demonstrating motherliness toward one's existing children or toward others in care and service (Paxson, 2004, 248–249). The popularity of this vision of virtue—which by embracing voluntary childlessness contradicts Greek Orthodox teaching on abortion and marriage—is evident in the low Greek birth rate and high abortion rate, both of which are surprising also in the light of Greek policies that reward parents of three or more children (Georges, 1996).<sup>54</sup>

In other cases not just women's religious virtue, but their safety and livelihood are at stake (Inhorn, 1996, esp. ch. 6). Marcia Inhorn's early work reveals that in patriarchal, patrilineal, patrilocal Middle Eastern Islamic societies, one realizes one's womanhood through maternity as well (Inhorn, 1996, 6–10). The identification between womanhood and motherhood is even more profound in modern Egypt than in Greece because, as a result of recent Islamicization, motherhood, charitable work, and housewifery are now considered by many Islamists to be the only appropriate work for married women of all economic brackets, and there are few real alternatives for either independent income or self-realization (Inhorn, 1996, 67–70). Women's acquisition of social and familial power can depend entirely on marrying well and then rising from daughter-in-law to mother-in-law. Consequently it is essential not just to bear children, but to bear male children (Inhorn, 1996, 4–6). Infertility or failure to produce boys threatens not just husbands' sense of virility and wives' sense of maternity but the future security of the family (Inhorn, 1996, 12–13): there is no one to inherit and no son to marry and remain at home to care for his parents. Potential ill consequences for women include mistreatment, polygyny, or divorce (Inhorn, 1996, 111).

<sup>54</sup> This does not imply that Greek Orthodox women see abortion as an unmitigated good; they see abortion as the responsible way to respond to an irresponsible pregnancy when one is not in the position to mother a new child (Paxson, 2004, 34, 61–62; Georges, 1996).

Yet her later work reveals that these consequences result less frequently than might be predicted. On one hand, the emergence of ICSI in the Middle East could have been expected to worsen the condition of women married to men with fertility problems by increasing the potential for divorce and therefore the potential for women's infertility-related financial and social suffering. ICSI allows infertile men with very poor sperm profiles—even azoospermia, or lack of sperm in the ejaculate—to produce genetic offspring. Their wives, many of whom have stood by them for years or even decades, may have grown too old to produce viable ova for the ICSI procedure. In the absence of approved donor egg technologies, such husbands occasionally forsake reproductively "elderly" wives in order to divorce and remarry or to take a second wife, believing that their own reproductive destinies lie with younger, more fertile women. The shame and stigma of divorce and supposed infertility can cause such women to be shunned by their families and prevent them from ever achieving economic security (Inhorn, 1996). However, in fact most infertile men choose conjugal connectivity over procreation, refusing to divorce wives with whom they cannot procreate (Inhorn, 1996, 2006a, b).<sup>55</sup> In addition, married men's personal distress over infertility and their endurance of embarrassing and even quite painful treatment loom large in their marital experience (Inhorn, 2002, 2003b, 2004, 2006a, 2007). Thus one notable consequence of failed fertility is the *de facto* emergence of a model of childless, companionate marriage built in part on the partners' shared history of suffering.

Finally, in many cultures maternity is a foundation for political authority. Where large numbers of adult men are marginalized, working in other countries, or dead as a result of war or disease, women wield palpable social, political, and economic power. In cultures with longstanding traditions of patriarchy, women's power comes from their claim to represent and protect the children of the society, from arguing that they are entering the political arena in order to be good mothers: to gain the healthcare, education, peace, and security that their (and others') children need. If they do not have children themselves, they may take on the persona of the mother of a particular community or a whole nation. Or they may produce children for the sake of the society and its survival.<sup>56</sup> Here maternity is not a matter of personal virtue or personal security only, but a matter of political power. Since these also tend to be cultures in which advanced medicine is available to very few people, it is unlikely that ARTs will produce a wave of children conceived under the ideal of political motherhood. But it is worth noting that the ideal of motherhood as fulfilling womanhood can take a decidedly political, empowering form.

Infertility affects men's gender identity as well. Virility is almost universally associated with masculine strength, ambition, and power, even where (as in monasticism)

<sup>55</sup> Infertile marriages in which the husband has been proven sterile survive in part for a reason having to do with preservation of traditional male gender identity: the couple allows others to assume that the wife is infertile; the husband is grateful to the wife for protecting his image of virility and making him appear benevolent; and the wife is grateful to the husband for not attempting ICSI with a younger woman (Inhorn, 2003b).

<sup>56</sup> On maternity as a political strategy in Palestine, see Kanaanah (2002).

it remains only potential. Infertility implies weakness, sexual impotence, and by association femininity and inferiority (Inhorn, 2003b, 238; see also Paxson, 2004, 238–239). In this context, quiet use of ARTs rescues men's gender identity as much as it does women's. In the case of Arab Muslims, for instance, successful treatment through ICSI restores men's masculinity in two ways. Most obviously, it makes them successful progenitors. But secondarily, it reinforces their authority in marriage: Although it is the husband who is infertile, the preponderance of the surgeries, all the hormone treatments, and the (often) twin pregnancies fall upon the wife, who accepts most of the discomfort and danger required to redeem her husband's masculinity (Inhorn, 2003b, 245–249).<sup>57</sup> Wives of impotent men often lie about their husbands' impotence even to medical practitioners, and as a consequence blame for childlessness continues to fall on the wives, with little comment from their husbands (Inhorn, 2002). However, the negative consequences of male infertility—in urban settings, at least—tend to be social and familial rather than, as for their wives, economic.

### 1.2.3.6 Sexual Orientation, Singleness, and Reproduction

As Helena Ragoné has observed,

Although “the family” as it has traditionally been understood in Euro-American culture continues to be shaped by a number of factors such as race, class, ethnicity, and sexual orientation, Americans are nonetheless regularly subjected to popular depictions of “the family” as a monolithic, timeless, universal institution. In spite of well-documented historical particularities and visibly diverse current practices, definitions of the family continue to follow fairly predictable trajectories, depicting families as nuclear, heterosexual, middle-class, white, and in a state of decline (Ragoné, 1998, 118).

If we remove “white” and add “perhaps within an extended household” to “nuclear,” this description fits dominant religious ideals of the “natural” family the world over.

The first question about this “natural” family is whether it is expansive enough to include ARTs as means. As we have seen, some traditions are wary of some or nearly all fertility interventions. For those that are more tolerant of interventions that preserve the “natural” family, the additional question is whether this umbrella is large enough to include not just new means to the usual end but also new ends: parenthood for gay and lesbian couples, single women, and even single men. It bears noting that many people who do not fit the description of “natural family” can already reproduce without submitting their plans, like building permits, for approval by public authorities, even though they and their offspring may suffer opprobrium for their “unnaturalness.” Thus the public cannot interrupt the reproductive plans of fertile unmarried heterosexual couples or of fertile lesbian women who make informal arrangements with friends for sperm donation. The policy question is whether a

<sup>57</sup>In cases in which men's semen contains no viable sperm, sperm must be removed directly from the testicles through the painful process of needle aspiration; see Inhorn (2007).

single woman or homosexual couple is “close enough” to the accepted definition of the natural family to be permitted access to ARTs. Widespread expansion of services to these groups could have divergent consequences. If widely used by committed gay and lesbian couples, for instance, ARTs could reinforce the idea of marriage as a natural institution for begetting and raising children, reinforcing the “nuclear family” as “natural norm” (Weston, 1991). If widely used by single women, they could have the opposite effect.<sup>58</sup>

Probably because no groups discussed (except a few liberal Protestant communions and some Reform and Reconstructionist Jews) recognize same-sex unions, use of ARTs by same-sex couples does not even reach the table in the literature analyzed here. Official teachings of Orthodox Christianity, Conservative and Orthodox Judaism, Roman Catholicism, Islam, Hinduism and most Protestant denominations forbid same-sex unions and vowed partnerships, usually on the logic that men and women were created as sexual complements so that they could join with each other in marital, sexual procreation and that other uses of sexuality are hedonistic and disrespectful of the divine plan. Parenthood for gay and lesbian couples is typically condemned not because their desire to be parents is unnatural but because their means of achieving it is; in addition, regarded as unrepentant sinners, they are thought to provide a harmful environment for children.

As we have seen, in Israel Jewish kinship laws make it possible for unmarried women to produce Jewish children, which amounts to tacit if unintended permission for partnered lesbians and single women to use ARTs, even though social stigma remains (particularly against lesbian reproduction). The path to surrogacy is closed to gay fatherhood in Israel, where couples contracting with surrogates must be married. Yet, although it is not a widespread phenomenon, gay orthodox Jewish men occasionally contract with unmarried Jewish women or lesbian women to have children, possibly in part to fulfill their religious obligation to procreate. Similarly, many gay Israeli men contract surrogates abroad. And Israeli lesbians are taking full advantage of state-sponsored artificial insemination, creating a lesbian baby boom. Fascinatingly, in both Greece and Israel it is clear that one of the primary objections to single motherhood—that it is the result of loose, careless pleasure-seeking—is moot.<sup>59</sup> In these nations single women who make use of ARTs desire motherhood, which is considered virtuous, without sex, which is considered selfish; and they plan carefully for their children's births and welfare, echoing an Israeli woman's succinct comment, “the time arrived, but the father didn't” (Kahn, 2000, 11).

<sup>58</sup>Second-order factors can call both predictions in question: gay or lesbian couples who do not conform to the norm of permanently partnered, monogamous pairs may present themselves as doing so to simplify access to ARTs or adoption or to simplify social relationships (thanks to Joseph Moser for this observation). Similarly, it is not clear that intentionally single mothers will alter the nuclear norm more radically than the enormous population of (often unintentionally) single mothers already has.

<sup>59</sup>In China, by contrast, women's infertility is regarded as a consequence of “loose living.” See Lisa Handwerker (2002, 185–186).

In any case, even where use of ARTs by religious singles, gay couples, and lesbian couples is on the increase, it is comparatively rare. Dominant voices in religious traditions and cultures that consider marriage truly or nearly mandatory and consider childbearing essential to a legitimate, successful union condemn use of ARTs by these groups; religious traditions and cultures that consider the "true family" to be the one that best approximates the advantages of a healthy nuclear family will allow or even welcome such exceptions when they are carried out carefully; traditions that fall toward the middle of the spectrum will be uncomfortable with the exceptions but—as in Israel and Greece—may ignore it or look the other way, especially if they can turn a blind eye to some women's lesbianism. A possible explanation for this stance is that, no matter how uncomfortable men may feel about being nearly dispensable to reproduction, it is hard to object to the willingness to become a "virgin mother." Because gay male parenting requires use of a surrogate, it will probably not be considered "natural" until and unless surrogacy for unmarried clients becomes "natural."<sup>60</sup>

It is worth noting that Protestant and Catholic Augustinian visions of wounded nature can have unexpected relevance here. A strong doctrine of human sinfulness or of the imperfection of the world can support religious arguments for single, gay, and lesbian use of ARTs. Put simply, whether one approves of homosexual unions and single parenthood or not, in an imperfect world, one should spend less energy arguing about inaccessible perfection and more energy identifying family settings that are "relatively excellent" or "good enough" for children and that permit adults adequate sexual, emotional, and spiritual intimacy for parenthood and spiritual growth.<sup>61</sup>

### 1.2.3.7 ARTs, Intercourse, and the Meaning of the Body

As we have already implied, for religious people the dependence of the "naturalness" of procreation on heterosexual intercourse is a basic question; this question in turn depends on the complex of meanings attached both to intercourse and to the processes that lead to conception. Traditions that assign rich, highly symbolic meanings to physical acts can be more reluctant to tamper with those acts, especially if the value of preserving their integrity is considered to be similar to or higher than the value of procreation. Yet paradoxically their theological articulations of these beliefs are still transformed by the phenomena of ARTs.

Roman Catholicism is instructive here. Contemporary Roman Catholic teaching combines a weighty understanding of sexual acts with a vision of marriage to which children are not essential. According to contemporary Roman Catholic teaching,

<sup>60</sup> IVF also overcomes distaste in some cultures over women having sex "after a certain age." See Paxson (2004, 216).

<sup>61</sup> See for example the development in positions on the normative family that occurs in Lisa Sowle Cahill's writing between her 1996 and 2000 works.

intercourse is nearly sacramental: more than any other act, it concretizes the divine grace that supports the couple in matrimony, strengthening them in love for each other and in mutual vulnerability, openness, and generosity. This marital act is the entire purpose for which genital sexuality was created. To use it otherwise—unlovingly, outside marriage, or intentionally obstructing any possibility of conception—is not just to disrespect and subvert the divine purpose but to do so in a way that desecrates the body as a site of grace and a holy conduit for cooperation with God's creative power. The reverse is also true: to procreate other than through this complementary, sacramental act of union and love is a desecration of the body in its union with mind and soul: "it reduces procreation to a mechanical manipulation of sperm and egg and thus neglects the embodied character of human love" (Lauritzen, 1993, 7, see also 8). Therefore,

any type of assisted reproduction that conforms to the procreative norm just articulated, i.e., any procreative attempt that includes sexual intercourse between partners in a loving monogamous marriage, helps facilitate the natural process of procreation and is therefore acceptable. Any intervention that fails to conform to the norm is a departure from the natural law with respect to human sexuality and is therefore morally problematic (Lauritzen, 1993, 6).

Even though the Roman Catholic Church forbids all procreative interventions (with the exception of treatments that increase fertility, and possibly of GIFT after intercourse with a perforated condom, which is interpreted as being "with" or "alongside" nature) and thus would seem to have a stable view of sex and procreation, the sheer process of evaluating ARTs actually alters Roman Catholic understandings of nature. Before the discoveries of modern reproductive medicine, for example, the definition of natural reproduction would not have included sperm ascending the fallopian tubes to fertilize the ovum, nor was the distinction between women's fertile and infertile periods—now essential to descriptions of Church-sanctioned methods of natural family planning—an element of the rhythm of natural marital sexuality. Likewise, discoveries about the female fertility cycle reinforce a relatively recent shift in Roman Catholic thinking on childbearing and on the emotional importance of marital sexual relations: family planning, never actually forbidden, is now morally enjoined if not morally required, and natural family planning (a method that does not involve long periods of complete abstinence, developed with thanks to contemporary reproductive medicine and now used by it to optimize the chances of conception for infertile couples) is now seen as natural and healthy. Thus the scientific account of fertilization is deployed to reinforce traditional norms, but with details that demand ever more specific rationales for limits on ART use.

A similar pattern can be seen in Greek Orthodox theologian John Breck's opposition to ICSI (intracytoplasmic sperm injection), a procedure that would seem to solve the problem of excess embryos created through IVF. In his objection we see an unbreakable association of "the natural" with "the divine." Because ICSI involves the injection of a single sperm into an egg, it eliminates the randomness (which Breck terms "divine intentionality") of sperm selection, which allows the "strongest" and "most fit" sperm to fertilize the egg. In his opinion, AIH preserves this divine intentionality. Breck states, "Orthodox Christians hold tenaciously to the



notion that there is no such thing as 'chance'....Sperm selection, then, is understood not as random, but as an example of divine-human synergy or cooperation. To put it in the simplest terms, selection of the gametes in any human conception can and should be made by God himself" (Breck, 1998, 183). "Naturally" occurring marital sexual intercourse is no longer the prerequisite for a religiously acceptable conception; the divinely intended, natural (Darwinian, if you will) process of selection of gametes has replaced it as the threshold that faithful assisted reproduction may not cross. Yet, without contemporary reproductive research one would not have known that sperm "compete" to fertilize an ovum and so could not have used this argument to reject ICSI as unnatural.

On the other hand, in the case of Orthodox Judaism, contemporary knowledge of the biology of reproduction seems to be making a new thing possible: redefining the relationship between reproductive values that formerly could not have been separated. The balance between the values of *relatedness arising from embodied parental relationship* on one hand and *reproduction of new bodies* on the other is shifting toward reproduction simply. Susan Kahn points out the irony: the main criterion for relatedness in rabbinic thought, physical relationship between Jewish bodies, is precisely the criterion that provides the metaphor for reproduction *without* body contact but *with* pure Jewish lineage nonetheless. Therefore "rabbinic enthusiasm for the new reproductive technologies has thus created an intriguing paradox. For while it reinforces the imperative to reproduce more Jewish bodies—a value of undisputed importance in a pronatalist system—it has unwittingly contributed to the conceptual disintegration of the significance of Jewish bodily experience, once a precondition for the creation of Jews" (Kahn, 2000, 171).

Thus, by asking questions that have not been thought of before, new developments in reproductive medicine force traditions to redescribe the "natural" even when their positions on the acceptability of particular acts change little or not at all, or else it forces them to privilege one of an array of criteria that formerly functioned as an integral whole.

### 1.2.3.8 Gamete Collection and Donation

Three kinds of issues arise around gamete collection and donation: for men, sin or impurity in the act of masturbation (clearly not an issue when, as in some cases of ICSI, sperm are removed surgically from the testicles); commercialization; and implications for improper relations among donors, parents, and children. The latter point has been mentioned above and will be discussed at greater length below, but the other two bear some mention here. There seems to be little stigma for women in any tradition against either drugs that regulate ovulation or induce superovulation or (as long as extrauterine procedures are not forbidden) against surgical removal of eggs. These processes, nearly universally described as unpleasant, produce no illicit pleasure for women.

Many traditions, however (especially Orthodox Jewish, Roman Catholic, and Islamic), look askance at male masturbation because it deposits gametes in an infertile

place, occurs outside of marital relations, is a product of self-pleasuring, and (in the Islamic case) is polluting (Inhorn, 2007). Confucians also believe that because sperm contain vital forces one should avoid donating them—and presumably should avoid masturbation altogether (Qiu, 2002, 78). Sri Lankan Buddhists believe that celibacy increases procreative power; periods of asceticism (for instance, a short-lived monastic vocation early in adulthood) increase a man's virility, and monastic asceticism ensures human virility and agricultural fertility generally (Harris, 2001, 150–153). Thus in this case too one would want to avoid dissipating one's procreative power, and couples might also be skeptical about receiving sperm from men whose sexual habits they do not know. Compounding these moral objections are practical ones: in many countries the lack of privacy in fertility clinics is an enormous psychological obstacle to men of whom semen for testing or IVF is demanded, especially when these requests are made publicly and on short notice (Inhorn, 2007).

Commercialization is also a concern. Significant numbers (though by no means all) of leaders from all religious groups we have discussed are averse to the idea that gametes or organs could be sold. Thus even where donation is acceptable as an act of good will, the sale of gametes—and particularly the catalogue approach to choosing a sperm donor—is seen as not only exploitive but also improperly manipulative, as well as dangerously vulnerable to eugenicism. Benevolence is a more palatable rationale than financial gain if one is looking for an adequate excusing condition for the pleasure of masturbation, which many traditions view as illicit or, especially for married men, at least distasteful and excessive (Jakobovits, 1994, 1997).<sup>62</sup>

This discomfort with commercialization is one inspiration for the Israeli insistence that all donated ova come from women who are themselves undergoing fertility treatment. In addition, this rule prohibits abuse of the bodies of women who would not otherwise undergo the uncomfortable, complex process of hyperovulation and extraction. The image is then mutual compassion—similarly disadvantaged people assisting each other—rather than business transaction or exploitation of labor. There is not room to pursue this instinct here, but our impression is that people who do not find the high costs of fertility treatment "unnatural" or improper nevertheless find paying for gametes or embryos "unnatural." For Arab Muslims and Athenians, for example, the cost of fertility treatment (both financial and physical) is part of the sacrifice that demonstrates the seriousness of one's pursuit of motherhood,<sup>63</sup> whereas—perhaps—paying for gametes or embryos seems dangerously close to an act which is not only unnatural but unjust: purchasing a human

<sup>62</sup> See also Kahn (2000, 204–205, n. 9–11) and Inhorn (2007). Liberal, and some evangelical, Protestants tend to see masturbation as developmentally normal and as acceptable if not done to excess; for a representative argument, see Grenz (1990, 214–215).

<sup>63</sup> In 1993 the Greek parliament mandated partial insurance coverage for infertility treatments for couples (Paxson, 2004, 216); the Greek conversation thus tends to run toward the extended physical discomfort of fertility treatments (ibid., 223). See also Inhorn (2003c, ch. 2).

being. Paying for a surrogate's services is uncomfortable but can be justified as proper compensation to a woman for the extra care she must take of herself and as cheap insurance for the health of the infant she carries.

### 1.2.3.9 Sex Selection, Disease Prevention, and Eugenics

Although each of these subjects could fill its own chapter, a word needs to be said about uses of assisted reproductive technologies that go beyond providing a gestationally and/or genetically related child to a single woman or infertile couple. These uses raise other important questions about nature. When careful selection of donated sperm, sperm separation, PGD, or selective abortion is used in combination with IVF or GIFT to select against disease or x- or y-chromosomal abnormalities, or for a desired gender or other valued trait, is "nature" "what would otherwise occur" but for the intervention? Is intervention (especially when one selects against genetic disease) thus benevolently repairing or avoiding an imperfection in "nature"? Particularly when these methods are used to select for gender (normally, for males), do people justify the intervention on a biological basis, or on the grounds of creating the socially and culturally proper "natural" family that physical "nature" does not always deliver?

Western thinkers tend to support the use of these technologies to select against diseases that are fatal or cause great suffering, but such uses also raise the specter of eugenics, worries that widespread interventions could in the future lead either to genetically homogeneous "superkids" or, conversely, to the mandatory formation of a separate slave class. The fact that such interventions are already being widely used to select for gender, even where this practice is illegal, leads to a further question: In what sense is gender selection "natural"? In the early 1990s Alison Renteln argued that making sex selection available exacerbates rather than softens the gender preferences and privileges enforced by the culture that employs the technology (Renteln, 1992).<sup>64</sup> This thesis seems to be holding true. In this case intervention in "nature" as "what would otherwise occur" is justified on the basis of "nature" as the cultural/religious "ideal shape of the family."

Predictably, then, judgments about the limits of acceptability for gender selection depend on a society's view of what is natural and acceptable. A group of ethicists in Spain, where the social ideal is egalitarian, have argued in favor of gender selection not only for gender-linked diseases but also for family balancing: parents who already have a male child and who want a small family, for instance, might select for a girl in their second pregnancy (Meseguer et al., 2002).<sup>65</sup> Observant Jewish families, for whom the father's obligation to reproduce

<sup>64</sup> Renteln (1992) also argues that to forbid use of sex-selection technology would, nevertheless, be improperly to limit women's reproductive freedom. For a similar argument, see Schenker (2002) and Sills and Palermo (2002).

<sup>65</sup> The authors add a number of important conditions: parents fund the treatment, each clinic must produce roughly equal numbers of boys and girls, unused embryos must be donated, etc.

includes at least one child of each gender, might make use these technologies for a similar reason (Schenker, 2002, 405–406). In Japan, a fundamental attitude of non-intervention may be giving way in a generation more accustomed to putting its private goals ahead of communal norms. There is some indication that Japanese parents are selecting for gender to avoid genetic disease and to balance families; in expectation of increased longevity, some Japanese parents desire girls, who are thought more likely to care for parents in their old age (Mori and Watanabe, 2002). As in the Orthodox Jewish case, this preference reinforces existing cultural stereotypes and gendered divisions of labor *without* necessarily preferring boys.

On the other hand, in some patriarchal cultures the results of gender selection are less balanced. According to Gautam Allahbadia, in India a combination of abortion, infanticide, neglect, and maternal death have already produced a deficit of 50 million women; use of ARTs for sex-selection would simply replace these existing less palatable methods and perhaps widen the gender gap by making sex-selection even more acceptable. The lucrative gender-selection business might simply shift from clinics that determine fetal gender and perform abortions (now outlawed, though not eradicated) to clinics that perform PGD and microsorting (Allahbadia, 2002).<sup>66</sup> In Asian societies where pressure to control family size is strong, parents are even more likely to practice sex-selective fertilization, abortion, and infanticide—as well as daughter-neglect—than they were when the possibility of another pregnancy (and another son) remained open indefinitely (Croll, 2000, 16–17). In China in particular, the strictly-enforced one-child policy, combined with strong rural preferences for boys and histories of men divorcing wives who do not produce male heirs, has led to widespread abandonment of girls (nearly one million currently) and to the use of gender selection techniques that skew the proportions of male to female births. Chinese policy analysts are hoping that the spread of urban trends (which show no preference for males) and some exceptions to the one-child rule (which could encourage parents to accept one daughter) will eventually reverse the tendency to select for boys (Chan et al., 2002). In the meantime, the current generations' gender imbalance could force unintended consequences: selective increases in women's status or greater acceptance of male homosexuality.

Thus people who accept ARTs agree that, with respect to disease, "nature" as "what would otherwise occur" can be subverted in favor of nature as healthy, perfected, and ideally realized (see, e.g., Hanson et al., 2002, 431–432). With respect to gender, though, "nature" as "what would otherwise occur" is often *reified* by western-influenced policymakers (given that uninterrupted reproduction produces fairly balanced gender on its own) but willingly *subverted* by individual women struggling to maintain stable positions in patriarchal families. In a sort of compromise between the two, some analysts argue in favor of limited use of gender selection

<sup>66</sup> As we noted above, other factors, including widespread hepatitis infections among mothers, may account for part of this difference.

to create "natural" gender balance within small families, as long as numbers of girls and boys born remain approximately equal overall.<sup>67</sup>

### 1.3 Pressures and Processes

As will by now be obvious, an enormous number of factors can enter the equation that determines both what forms of reproduction are considered "natural" and how and when it is important that this sort of "nature" be preserved. Our hope in the remainder of this essay is to highlight the some of the less obvious underlying variables, partly to suggest lines of possible further questioning. The two most important, most complex factors that we have observed are pronatalism and religious strategies for naturalizing technology.

#### 1.3.1 Pronatalism

In some cases—for example, among some Palestinians and orthodox Jews, or in Greek government policy—pronatalism simply encourages a high birth rate in order to expand a population. But pronatalism can and normally does run far deeper than a plan for population growth and takes unlikely forms; for example, in urban Greece, sometimes a policy of population expansion goes hand in hand with a popular, religiously inspired pronatalism that paradoxically results in a low birth rate. Speaking very broadly, our research shows that the degree of value placed by women themselves on giving birth to children dictates the degree to which they are willing to depart from the "natural" standard of heterosexual intercourse in favor of ART interventions, and the degree to which their religious community or culture also values their giving birth dictates the degree to which it will support their choices officially or at least look the other way (keeping in mind that a particular religious culture—e.g., Irish American Catholicism—might be more pronatal than the larger institution of which it is a part—and vice versa).<sup>68</sup> In pronatal cultures childbearing is typically considered an element of women's identity or of their essential nature; childless women are considered stunted because they cannot (as in the Athenian formulation) become what they are—cannot accomplish the end for which they were created.

<sup>67</sup> See for example Meseguer et al. (2002); Hanson et al. (2002, 432) support gender selection in the case of monogenetic diseases only, because they are skeptical that people will preserve "Nature's own sex ratio" by free choice.

<sup>68</sup> The degree to which explicit or tacit pronatalism dictates or at least suggests the practical (as opposed to official) outcome of ART debates in a given religious setting varies. For example, conservative Roman Catholics are likely to agree that separating sex from reproduction is illicit, but traditional arguments that only reproductive intent, in marriage, excuses the disruption of reason caused by sex are likely to motivate them to employ ARTs.

Neither can their husbands demonstrate their maleness, in order to realize their own natures. In patriarchal cultures, especially for women of the middle and lower classes, procreation is not only a prominent cultural value but also women's most reliable hedge against abuse and social, religious, and economic instability, a situation that gives women an extra degree of desire and determination to bear children. And, in many cultures, if children are not the whole purpose of marriage, they are at least a significant part of the justification for married sexuality. In all these ways, then, a pronatalist culture affirms married childbearing as "natural" and as essential to the fulfillment of universal or nearly universal divinely given human ends.

The theological arguments that back this judgment are often complex, layered, and multivocal, so that several conflicting or at least different interpretations can operate simultaneously. One good example is Christian belief in the virginity of Mary, the mother of Jesus, which supports celibacy, marriage, and motherhood, all in one. Hindu beliefs too are complex and multi-voiced. Goddesses reflect, transcend, transgress, and provide models for earthly female life. Normally, in Hindu scriptures, powers and modes of being have constructive and destructive sides. So it is with women: married women are often pictured as docile, nurturing, benevolent, transforming unjust structures through clever use of their limited roles, and unmarried women are portrayed as transgressive, volatile, and vengeful. Celibacy among gods and goddesses is generally portrayed as dangerous, but also as powerful. Hindu scriptures read through this lens imply that women's path to virtue is marriage and, presumably, motherhood (Marglin, 1985). But lurking behind or within each woman/goddess, whether domestic or dangerous, is her alter-ego.

In some cases, existing "natural" pronatalist arguments have been magnified by a religious group's judgment that it needs to increase its size in the face of external threats. In the Middle East, for example, both Arab Muslim and orthodox Jewish communities have combined a renewed emphasis on religious distinctiveness with promotion of high rates of childbirth, driven in the Jewish case by a desire to overcome the decimation of the Holocaust (Kahn, 2000, 3–4; Kanaanah, 2002; Barris and Comet, 1994, 31). In nearly all situations in which women are strongly pressured to reproduce, religious leaders find ways to "naturalize" at least some forms of ARTs so that the goals of true womanhood, true manhood, and the "natural" family can be fulfilled. Means of religious naturalization will be discussed below; for the moment, the point is that pronatalism predicts which "natural" values will be sacrificed, and which supported.

The Athenian variation is worth noting, as Greek pronatalist policies (which reward families with three or more children) are not the motivating factors for well-off Greek single and partnered women who desire to bear children. These women nevertheless qualify as pronatalists by virtue of their belief that motherhood completes womanhood. Like some Israeli ART clients, they are professional and sometimes even self-supporting. They do not need to bear children in order to secure their economic futures; they only want to realize themselves, and they can afford the steep price of this privilege (Paxson, 2004).

The market is also a factor. Here pronatalism becomes a consumer value. In India, as Aditya Bharadwaj argues, pronatalism receives a push from the market through

sophisticated info-mercials: "the assisted conception industry is engaged in a process of ingratiation with the journalists to ensure favorable depiction in the media" (Bharadwaj, 2000, 65) with the result that "the need for these technologies and their experts is being generated—at least in part—through media narratives" (Bharadwaj, 2000, 76). American scholar Jennifer Stone concurs, noting that although American infertility has actually declined, the media have successfully generated the impression of an "infertility epidemic" in collusion with the fertility industry and other cultural factors (Stone, 1991, 313)<sup>69</sup>: "today the meaning of 'infertility' has been shaped largely by a commercial mass communication system that includes interdependent mass media industries, public relations, and advertising agencies" (Stone, 1991, 314). A quick perusal of American fertility websites and newspaper articles demonstrates how easily advertising the possibility of assisted reproduction generates a need that is justified by pronatalist arguments or sentiments.

Clearly pronatalism's influence is much more complex and varied than off-handed references imply. The highly complex Greek situation—which combines Greek pronatal policies; visions of womanhood-as-motherhood; and an anti-abortion, ART-wary Church that has hinted that the childless may divorce to find fertile spouses—could be expected to produce a high birthrate and nearly mandatory, covert use of ARTs, but in fact ART use (though growing) is thoughtful and selective, and the birthrate is below replacement levels (Paxson, 2004, 262). On the other hand, as we have seen, in officially-anti-natal China strictly enforced family limits, widespread diseases that compromise fertility, and continuing cultural preference for large families and male heirs may make childbearing, and therefore ARTs, nearly mandatory where they are available and affordable.

### 1.3.2 *Naturalizing ARTs: Holy Paths, Religious Authority, and Strategies for Change*

As we have been arguing, ARTs cause religious anxiety by demonstrating that understandings of "natural" family structure, gender, marriage, procreation, and inheritance that have been seen as indivisible wholes are actually composed

<sup>69</sup> According to Stone, the apparent epidemic is result of the following factors: (1) contraception gives people the impression that they can control fertility, turning it "off" when it is unwanted and turning it "on" when it is desired; (2) the numbers of working women are rising, leading to more concern about baby timing; and (3) the proliferation of fertility clinics leads to the need to generate demand through "educational seminars" and the like. Stone also charges that for commercial reasons the media create the impression that classic infertile woman is white, married, middle-to-upper class, professional. Actually she is African-American, black, older, with no previous children, and with less than high school education. The media also grossly downplay the link between environment and infertility (Stone cites government estimates "that 15 to 20 million jobs in the United States expose workers to chemicals that might cause reproductive injury" and a Centers for Disease Control study that "called human reproductive failure 'a widespread and serious' problem, and one of the ten most prevalent work-related diseases" (1991, 324–325).

of parts that are *de facto* distinguishable, even separable.<sup>70</sup> Religious people, communities and individuals can respond to this development in one of two ways. Both involve naturalizing a vision of reproduction by divinizing it: redescribing reproduction in terms of their vision of divine creation, divine law, or the shape of the holy life. First, they may renaturalize by redivinizing: acknowledging scientific discoveries; taking them into account by revising and reinforcing the theological arguments behind their original, unified visions or law; and preserving these traditional visions or laws in newly-credible, finely-textured scientific language, thereby subtly transforming them.<sup>71</sup> Official Roman Catholic teaching on ARTs is a good example: the Church rejects ARTs but employs knowledge gained through reproductive research to sharpen its own description of a holistic, procreation-driven, divinely created, gendered human nature and reproductive process.<sup>72</sup> Or, they may naturalize by selectively divinizing: accepting the *de facto* dissection of the formerly indivisible vision; anointing particular elements *de jure* natural-because-divinely-intended; and willingly sacrificing others. Single Athenian women's valuation of motherhood over conception through marital intercourse illustrates this approach.

The strategy chosen depends heavily on the tradition's sources for knowledge of the divine will or holy path, on the traditional location of interpretive authority, and on the relationship of the individual to that authority—not to mention the degree and kind of local pronatal pressure. In what follows we will—without attempting to be comprehensive—reflect on the different strategies of response produced by varying understandings of authority. We will focus on the divinization of ARTs in a few traditions where religious authority is centralized and in a few in which it is not, with emphasis on the latter, because decentralized religious authority is a widespread phenomenon less familiar to American readers.<sup>73</sup> Nearly universally, however, religious people regard infertility as an obstacle that has religious significance and may in fact have divine origins; seek knowledge of God's will generally and in their specific situations; view the success or failure of their treatment as a consequence of God's will for and intervention in their lives;

<sup>70</sup> Mette Bryld notes the same anxiety in the political community. "With their capability of radically eroding the apparently 'natural' order of life ('natural' human beings, 'natural' motherhood, 'natural' nuclear families, 'natural' kinship, etc.), reproductive technologies and reproductives evoke so much anxiety and such strong fears in the political mind that, as if in defiance against all this monstrosity, its cultural imaginary clings to what is perceived as either 'natural' or, for lack of anything better, as 'close to the natural as possible'" (Bryld, 2001, 301–302).

<sup>71</sup> On the transformation of language see Franklin (1997, 104–105).

<sup>72</sup> On this transformation of "the natural" generally see Franklin (1997, 104–105). This is perhaps the most conservative possible example of what she calls the "substitutability" of nature and technology. See Franklin (1997, 209).

<sup>73</sup> In our experience, professional organizations and the press tend to ask scholars to outline the position of a religious communion on a moral issue. The question bespeaks the assumption that all religious communions possess clear bureaucratic structures and centralized authorities and value unanimity on all moral issues highly. This is rarely the case.

and believe that God acts through the clinicians who attempt to help them conceive. In non-theistic traditions, the idea of karma or cosmic balance may stand in for the divine.

Orthodox Judaism is a good example of decentralized authority. Orthodox Jews tend to understand new reproductive technologies as a set of tools and strategies that can be readily appropriated and harnessed to achieve individual and collective goals. The threat they pose to traditional notions of the natural family, or the role of God in conception, can be negotiated and resolved through textual interpretation aimed at strengthening and benefiting the community. The interpretation of these technologies takes place on both the formal and informal levels.

On the formal level, the interpretation is embodied by the multivocal rabbinic tradition of debating and of mining traditional texts for beliefs about the mechanics and meanings of conception. In Jewish cultural life the divine texts of the Torah are a privileged conceptual space that is believed to contain all knowledge. There is no "new" knowledge, for human innovation cannot invent knowledge that is absent from the Torah; human innovation can simply present challenges to those invested with the authority to interpret the Torah by revealing hidden knowledge through textual excavation. Rather than weakening this authority, the rabbinic response to novel reproductive technologies—to search traditional texts for precedents that determine the nature and location of relatedness—actually reinforces the belief that the Torah embodies all knowledge and that the answer to every question can be found through interpretation of traditional texts. As a consequence the perhaps irreversible social processes that ARTs set in motion do not displace orthodox Jews' foundational assumptions about authority and kinship. On the contrary, orthodox rabbis have full confidence that their interpretive strategies can create social uses for these technologies that are coherent with traditional assumptions about kinship. If so, the social uses of reproductive technology in Israel will enhance the authority of rabbinic conceptions of kinship, a result that may also both entrench the importance of maternity as the ultimate determinant of Jewishness and reinforce the cultural imperative to reproduce.

Policymakers and others who may be in search of the orthodox Jewish position on ARTs must be aware, however, that rabbinic authority is not centralized. A rabbi gains authority through a reputation for wisdom in debating within and against a complex, multi-voiced tradition of rabbinic casuistic commentary. When a rabbi puts forward a novel interpretation of the tradition, it may over time be embraced, rejected, or simply ignored, with corresponding implications for its power in the orthodox Jewish community. Not surprisingly, there is no single, authoritative rabbinic position on any ART therapy. Rather, formal rabbinic responses have been complex and wide-ranging.

Since the late 1940s, when artificial insemination among humans first became a medical alternative, orthodox Jewish rabbis have hotly debated every nuance concerning the possible use of these technologies, resulting in a plethora of often-conflicting rabbinic opinions. From a halakhic point of view, as we saw above, concerns include introduction of third-party donor material into marital conception, appropriate extraction of sperm and ova, appropriate protocol surrounding the artificial

conception of embryos, surrogacy, and terms for reckoning kinship established through reproductive technology.<sup>74</sup>

Rabbinic flexibility regarding the use of these technologies typically rests on four basic principles, all of which connect to a theological vision of covenantal law<sup>75</sup>:

- The technologies aid in the fulfillment of the divine commandment to be fruitful and multiply (Genesis 1:28), considered an obligation of central importance in Judaism and therefore a marker of "natural" family life.
- The suffering caused by involuntary childlessness (i.e., being thwarted in fulfilling the command to bear children) is evil.<sup>76</sup> The mitzvah to practice loving kindness obligates the rabbis to do everything they can to alleviate that suffering, including the prescription of assisted reproductive treatments.
- Family integrity—the natural family as "whole" family—is a nearly absolute halakhic value. Permission to use ARTs can prevent the kind of serious marital difficulties that can arise for a childless couple, including the traditional (though seldom applied) obligation to divorce after ten years of childless marriage.
- Since the medieval period halakhic tradition has exhibited extraordinary receptivity to advances in medical science and to reconciling philosophical concepts of rationality with the Torah.

On the informal level, individual Jews struggle to make sense of these technologies in their own ways, depending both on the role religion plays in their lives and on their metaphorical spheres of reference. For orthodox Jews, the principle of *hishtadlus* is instructive here. *Hishtadlus* requires the individual to exert maximum effort within halakhic guidelines in order to fulfill halakhically imposed obligations. In the case of marital infertility, "making hishtadlus" might mean undergoing fertility treatments in order to fulfill the obligation to be fruitful.<sup>77</sup> However, success in that effort is ultimately determined not by human effort but by God, who through *hashgacha* (divine providence) is a partner in all human efforts and may grant or deny fruitfulness. When queried as to whether it is technology or God that accomplishes assisted conception, one observant doctor explained that "truly religious people understand that at the end of the day it is up to God to smile on the process in order to make it work" (Kahn, 2006, 472). Orthodox couples who use fertility services believe that God chooses their doctors; they develop special prayers and rituals to accompany the treatments; they employ numerology

<sup>74</sup> For a fuller discussion of the halakhic issues involved in artificial insemination, egg donation, and surrogacy, see Kahn (2000); see also Bleich (1997b, c) and Bick (1997).

<sup>75</sup> For items 1–3, see Kahn (2006, 471).

<sup>76</sup> It is hard to exaggerate the profundity of this suffering among infertile Orthodox couples. See Barris and Comet (1994).

<sup>77</sup> According to Kahn, recent rabbinic opinions limit this obligation by noting that people cannot be required to do something of which they are physically incapable; that is, an infertile person who is physically incapable of contributing to conception is not required to undergo fertility therapy. These opinions emerged as a way to end the suffering of patients who exhausted themselves physically, emotionally, and financially in order to achieve conception, without success.



and other traditional theological and exegetical methods to develop explanations and descriptions that divinize and therefore naturalize the treatment process and its components (Kahn, 2006).

Finally, regardless of the tenor of the larger debate, local rabbinic authority often dictates practices within the local community. Despite the enormous variations in acceptable rabbinic views, infertile orthodox couples may not simply shop for a sympathetic opinion. Rather, they are bound to obey the opinion of the same rabbi concerning infertility treatment to whom they turn for guidance in other aspects of their life. Consequently, in keeping with the fourth principle above, each orthodox couple's fertility problem is evaluated by both their rabbi and a doctor, who work together to balance and integrate halakhic considerations with available and appropriate medical protocol.

At the opposite end of the spectrum, less observant Jews, whose concern to adhere to halakhah is less intense, may either ignore rabbinic guidelines entirely or establish practices rooted in new interpretations of halakha. Reconstructionist rabbi Renée Bauer, for instance, reasons that a child conceived by an observant but non-Jewish lesbian with her Jewish partner is also Jewish—not because of biological origin of the sperm, or through adoption or conversion, but because its parents intend to coparent the child they have conceived together in a Jewish household.<sup>78</sup>

Clearly orthodox Jews have embraced the potential of new reproductive technologies both formally and informally. This embrace has not challenged traditional notions of kinship, nor has it destabilized traditional understandings of the role of God in conception. Rather, extraordinary efforts have been made, both conceptually and practically, to integrate these technologies into existing systems of religious meaning and existing social and professional networks. Rabbinic flexibility with regard to the appropriate uses of these technologies is perhaps extraordinary when juxtaposed with other religious traditions, but when understood in context of the historical processes of rabbinic decision-making regarding medical and technological developments more broadly, it is in fact commensurate with traditional practice. It should also be noted that the freedom this flexibility bestows on infertile orthodox Jewish couples is actually, rather than only potentially, a two-edged sword: it explicitly requires them to make greater efforts than ever before to fulfill their obligation to reproduce, further solidifying the heterosexual, married, Jewish, gestating couple as the halakhically normative family.

In Sunni communities, moral deliberation on important issues is centralized and scripturally based, and authoritative *fatwas* are issued by clerics who in some cases are even appointed and paid by national governments (Inhorn, 2003c, 104). As we have seen, these *fatwas* permit use of ARTs in support of homologous, marital reproduction, but concerns about adultery and inheritance have led the Sunni clerics to forbid the use of third-party gametes. Notably, these limits are very

rarely transgressed in practice, thanks to Sunni Muslims' concerns to procreate in Islamically correct ways.<sup>79</sup>

Iranian Shi'ite Muslims are no less concerned than their Sunni counterparts to conform to religious tradition.<sup>80</sup> But two factors lead to greater potential flexibility in the uses of ARTs among Shi'ites. First, they employ an individualized form of moral reflection, known as *ijtihad*, which makes use of *'aql*, or intellectual reasoning, rather than relying primarily on scriptural exegesis. This method has opened a door among some adventuresome Shi'ite religious leaders toward third-party donation to resolve infertility in married couples through a potential subtle transformation in concepts of kinship. Rather than breaking with traditional visions of kinship entirely, these new approaches employ them innovatively. The process of transformation began with a tentative step away from absolute prohibition. In the late 1990s, the Supreme Jurisprudent of the Shi'a branch of Islam, Ayatollah Ali Hussein Khamanei (successor to Iran's Ayatollah Khomeini) issued a *fatwa* declaring that egg donation "is not in and of itself legally forbidden," but that *both* the egg donor and the infertile mother must abide by the religious codes regarding parenting. Thus, the child of the egg donor has the right to inherit from her, as the infertile woman who received the eggs is considered an adoptive mother. Sperm donation is a slightly different case (Inhorn, 2006b). The baby born of sperm donation follows the name of the infertile father rather than of the sperm donor and, as with egg donation, the donor child can inherit only from the biological father, since the infertile father is considered to be an adoptive father.

Second, Shi'ite clerics overcome these problems of potential adultery by justifying gamete donation for their followers under a form of Shi'ite temporary marriage called *mut'a* (also called *sigheh* in Iran) (Zuhur, 1992; Inhorn, 2006b), which allows couples to avoid the complications of adultery. *Mut'a* is a union between an unmarried Muslim woman and a married or unmarried Muslim man, which is contracted for a fixed period in return for a set amount of money. In the past, divorced or widowed women often engaged in *mut'a* marriages for financial support, and Shi'ite men contracted *mut'a* marriages while traveling, or as a means of achieving marital variety and sexual pleasure. Since the arrival of donor technologies, *mut'a* has been invoked to make egg donation legal within the parameters of marriage. In Iran, unmarried women who agree to participate as egg donors may enter one- or two-day *mut'a* marriages for a fee. Such marriages require no witness and are not officially registered; thus, they can take place in confidence in the back rooms of IVF clinics. Indeed, donors who wish to remain anonymous enter these *mut'a* marriages by written agreement, without ever meeting the recipients of their eggs or their

<sup>78</sup> Bauer (2006, 33). Reconstructionist Jews practice egalitarian descent: a child is a Jew if either of its parents is a Jew.

<sup>79</sup> A global survey of sperm donation among assisted reproductive technology centers in 62 countries provides some indication of the degree of convergence between official discourse and actual practice. In all of the Muslim countries surveyed, sperm donation in IVF and all other forms of gamete donation were strictly prohibited. Meirou and Schenker (1997), cited in Inhorn (2003c).

<sup>80</sup> Shi'ites, the minority branch of Islam, can also be found in parts of Iraq, Lebanon, Bahrain, Saudi Arabia, Afghanistan, Pakistan, and India.



temporary husbands or divulging their own personal information to them, receiving their money following egg harvesting (usually around US\$550).<sup>81</sup> Thus oddly, despite meticulous concern for adherence to religious law, egg donation is largely a financial transaction.

But donor sperm are more problematic than donor eggs because—as a Muslim wife cannot have more than one husband, and single women cannot legitimately bear children—they inevitably produce an out-of-wedlock child, or *laqit*. The rarely-exercised option in this case is for a woman to divorce her husband; wait three and a half months to ensure that she is not pregnant; enter a temporary marriage with a fertile man; and later divorce him and remarry her first husband (Tremayne, 2005).

In Iran, religious rulings regarding gamete donation have continued to evolve quickly. A law on gamete donation passed in 2003 in the Iranian parliament (*majlis*) and approved by the Shi'ite Guardian Council restricted gamete donation to married persons. Egg donation is allowed, as long as the husband marries the egg donor temporarily, thereby ensuring that all three parties are married. Sperm donation, on the other hand, is forbidden, because polyandry is illegal: an already-married woman whose husband is infertile cannot marry her sperm donor. However, quite interestingly, embryo donation—which involves both sperm and egg from another couple—is allowed in order to overcome both male and female infertility. Because an embryo comes from a married couple and is given to another married couple, it is considered *halla*, or religiously permissible (Tremayne, 2005; Inhorn, 2006b). This allows Iranian couples affected by male infertility to bypass the problem of the husband's weak (or absent) sperm. Embryo donation, like egg donation, is primarily a financial transaction, but it is much more heavily regulated.<sup>82</sup> According to Tremayne, the recent law in Iran specifies clearly that infertile couples requiring an embryo apply in writing to a court for permission for embryo transfer. The law specifies that, like adoptive couples, the recipient couple must be morally sound and suitable as parents and must be Iranian citizens. Yet the donor embryo law is so new that most IVF clinics in Iran do not yet own a copy of the legislation and do not necessarily abide by it. If the husband is infertile, the couple simply receives another couple's embryos, with most donor couples choosing to remain anonymous. One author of this paper, Marcia Inhorn, observes that absent a national law, similar patterns of reasoning seem to exist among clinics that serve Shi'ites in Lebanon.

<sup>81</sup> Tremayne (2005). In Iran, women commonly bring their sisters as potential egg donors. But this is not allowed, as Islam is explicitly against the marriage of one man to two living sisters. Apparently, men also bring their brothers as potential sperm donors, despite the prohibitions outlined below. Tremayne observed one case where the husband did so without his wife's knowledge; the wife believed that she was receiving her husband's sperm instead of that of her brother-in-law. She also reports that non-anonymous donations sometimes lead later to tension between the birth family and the female donors who wish to exercise parental rights.

<sup>82</sup> This is very similar to organ donation, which is being done through financial transactions between donors and non-related recipients in Iran; see Tober (2004).

Consequently, some Shi'ite Iranian and Lebanese couples are beginning to receive both donor eggs and donor embryos<sup>83</sup> as well as to donate their gametes to other infertile couples. Their reasons hint at the path future clerical justification may take. Infertile Shi'ite couples who accept the idea of third-party donation—as well as Ayatollah Khamanei—describe donor technologies as “marriage saviors” that deflect the “marital and psychological disputes” that may result from otherwise untreatable infertility (Inhorn, 2006a). They fit this treatment into a view of life in which God not only prescribes marriage and childrearing for all but is present and intimately active in all events. Like orthodox Jews, Muslims of all stripes believe that all creation, including the creation of human beings, is ultimately in God's hands; or, as Egyptians are fond of saying, “Human beings are incapable of creating even a fingernail.” Each individual's life is “written” by God; events occur at predestined times according to a plan the purpose and meaning of which can be known only by God. Most important to this discussion, human procreation is beyond human control. God not only decides who will be fertile and who will be infertile but also imbues each fetus with a soul and a gender (Quran 42:49–50; Inhorn, 2003c, 102–103). Thus, infertility is ultimately explained by most practicing Muslims as an example of God's will: if God does not allow a woman to become pregnant, it is because God has reasons for waiting—for example, to prevent the birth of a child who will be abnormal or grow up to lead a bad life. Thus, women who fail to become pregnant often remark, “My time hasn't come yet.” Yet, as in orthodox Judaism, the belief that life is “written” does not imply that human beings are passive creatures, devoid of volition and will. Science and technology are part of the divinely scripted human story. God expects human beings to exercise their minds, to make use of available means, and to make choices, including decisions about seeking treatment for conditions such as infertility. Infertile Middle Eastern Muslims argue that since God expects those who are sick to seek treatment, they are obligated to do so (see Inhorn, 1994, 212–218; 1996, 65, 76–81).

Thus in both the orthodox Jewish and Muslim cases, the divine will is made known through debates among religious leaders who work within the developed notions of divinely-ordained kinship to promote a heterosexual, gestational vision of marriage and family. Both see medicine as a divinely-ordained means for pursuing this divinely-ordained, ideal (even obligatory) vision of family life. In both traditions determinations about means are made “on the ground,” often for particular couples, with significant pastoral concern, in full awareness of the spirited debates being conducted among religious authorities. And in both traditions, infertility, its treatment, and its unknown outcome are all seen as part of God's wise but impenetrably mysterious plan for individual lives.

<sup>83</sup> Furthermore, in Lebanon, anonymous sperm donation—using frozen sperm from overseas sperm banks or fresh sperm samples from mostly medical and graduate students—is also “quietly” practiced in IVF clinics. One of Marcia Inhorn's azoospermic Lebanese male informants produced a donor child this way, and several others, both Muslim and Christian, had also made the decision to use donor sperm.

A similar pattern can be found in Hinduism. Westerners especially must be cautious about making blanket statements about Hindu moral thought, for Hinduism "encompasses a broad array of traditions, sects, and religious-philosophical schools" (Marglin, 1985, 39), and its beliefs, customs, and emphases take on highly particular local forms. The moral tradition, though unified by very general principles of life-promotion, is also multivalent and multi-voiced, without any sort of central authority or system of doctrinal dissemination. This multivocality is also due in part to the importance of narrative in Hindu moral reflection, which in turn feeds on the proliferation of gods and goddesses and the scriptural accounts of their personalities and interactions.

Like Arab Muslims and Israeli orthodox Jews, Indian Hindus have traditionally seen childbearing—especially the production of male children—as essential to marriage and to female identity. Begetting a son is not merely a this-worldly duty but fulfills ritual obligations: it delivers male ancestors from *putra*, a hell (Fagley, 1965, 333; Bharadwaj, 2003, 1870–1871), and ensures that rituals necessary to the health and successful passage of a father's soul can be performed for him after his death (Mohapatra et al., 2001, 34; Bharadwaj, 2003, 1870; Crawford, 2003, 116–119). Infertility and adoption are stigmatized, elevating the pressure to conceive (Malpani and Malpani, 1992, 49–50; Bharadwaj, 2003, 1870–1871). In addition, "Hindu law is very flexible and accepts anything which is good for mankind provided that it does not inflict any injury to the moral values and sentiments of others" (Chakravarty, 2001, 11–14). Here clearly "good for mankind" is the operative value; enormous numbers of Hindus welcome ARTs as means to fulfill the social and religious obligation to procreate. In fact, they are so welcome that Malpani and Malpani argue forcefully against use of expensive, inefficient techniques like ICSI and for the development of lower-technology, lower-cost methods that, while they might be less effective per treatment cycle, are cheap enough to be universally accessible (Malpani and Malpani, 1992, 49–50).

In addition, Hindus too see the divine—unified in one God, but manifest to people in the local actions of multiple gods and goddesses—as involved in the minute details of daily life. Hindu ART patients often make temple pilgrimages to petition for successful treatment, and patients and clinicians tend to place each case in the hands of God, attributing success or failure to God's will (Bharadwaj, 2006; "Medical Ethics", 2002). But the particular character of Hindu relationships to divinity tends to differ slightly from some monotheistic traditions. In Hinduism the disciple is to the god roughly as child is to parent, and it is understood that the god expects and tolerates childlike behavior—the religious equivalent of tantrums—and will eventually reward or at least comfort this persistent pestering. In addition, the wall between divinity and humanity is a bit lower than in many monotheistic traditions, allowing doctors and medical therapy generally to be treated as quasi-divine (Bharadwaj, 2006).

We cannot speak with utter confidence on the popularity of these ideas, but there is some evidence that the concerns that ARTs raise about divinely intended nature are slightly different in Hinduism than in either Islam or Judaism. Since the goal of Hindu life is to be reborn as a higher being, the spiritual auspiciousness of any event has moral overtones. An author in *Hinduism Today* notes,

From the Hindu point of view, conception connects a soul from the next world to this world, and the state of mind at the moment of conception including the purity and spiritual intent of both partners is a major factor in determining who is born into the family. Prospective parents often offer prayers at the temples, perform spiritual disciplines and visit saints for their advice and blessings in their effort to conceive a worthy child. In Western thinking, no emphasis is placed on the state of mind of the parents at conception, and there is little understanding of the ways parents can affect the "quality" of the souls born to them ("Medical Ethics", 2002).

The same article hints that IVF, third party donation, and other procedures, while not absolutely forbidden, must be used cautiously because they may introduce *spiritually* problematic unknowns into the conception of a child; the implication is that homologous procedures are less spiritually and psychologically risky than heterologous ones, which not only weaken the child's relationship with the biologically unrelated parent but may bestow the bad *karma* of adultery upon the child. The "unnaturalness" in this case is explained as being a matter of virtue and spiritual auspiciousness, not a just a matter of legal right-relationship.

Another evidence of this difference can be found in references to *niyoga*, an ancient custom that has been suggested as a justification for third-party sperm donation ("Medical Ethics", 2002; Schenker, 1992, 4; Crawford, 2003, 116–119), but also as worthy of revival in its old form, because it avoids the possibly emotionally and spiritually inauspicious intervention of "unnatural" medical instruments in conception and typically maintains some genetic connection between the social and donor fathers (Mohapatra et al., 2001, 33–38). In this case achieving the "natural" family—specifically, the production of a son—and the ideal of "natural" heterosexual intercourse seem to share primacy of place. This now-defunct custom allowed a childless widow, a woman betrothed to a man who died before their marriage, or a woman with a sterile husband to contract with one of her husband's male relatives to impregnate her. The relationship was to last only until impregnation occurred, permitted intercourse only once per month during her fertile period, and involved a number of regulations in dress and conduct designed to reduce the possibility of "extra" visits and of full enjoyment of sexual contact. It could also be renewed later if the child conceived turned out to be a girl, or if the family desired a second son. Any resulting children were considered the offspring of the woman's husband (Mohapatra et al., 2001, 33–35). But it was clearly an asymmetrical solution, providing only a means for fertile women to conceive sons for their infertile or dead husbands and (because it was available to widows) valuing production of a son above creation of a mother-father-child unit.

Mohapatra, Dash, and Padhy find precedent for *niyoga* in the *Manusmṛiti*, or Laws of Manu, dating from the second and third centuries AD. But they are also quick to point out that if their solution is orthodox, this does not mean that it is obligatory, as—if fulfillment of ritual obligations is really the only concern—there are a number of other traditional ways for a man to "acquire" a ritually acceptable son. As alternatives to *niyoga*, a husband might traditionally have pursued various kinds of adoption; recognized a child possibly or definitely conceived by his wife with another man; purchased a son; or recognized a son he had conceived before marriage. Failing all of these, a woman could appoint a son conceived through her

second marriage to perform rites for her first husband, or (if a man had a daughter but no sons) he could, at his daughter's marriage, claim rights to her future first son (Mohapatra et al., 2001, 35–37). Seen from this angle, the criteria of the divinely-ordained natural family seem to be a man and his son, as a woman's role is really to bear a son for the father.

The case of *niyoga* illustrates how, in Hindu thought, although divine will can be discerned in scripture and tradition, and local custom or theology can make a convincing case for a particular approach or set of guidelines, there is no theological means of universalizing any single conclusion. The discussion remains inherently multi-vocal. In contrast to Western monotheistic traditions, few Hindus consider unanimity on concrete moral questions even to be a religious ideal. The result is a flexible system that has both the advantages and disadvantages of responsiveness to individual cases and local customs.<sup>84</sup> In addition, *niyoga* and other variant means of acquiring sons demonstrate that Hinduism's practice of accomplishing "orthodox" family formation flexibly to accommodate infertility is backed by a tradition of nearly two millennia. This suggests that ARTs, like the myriad solutions that predate them, will never *by themselves* dislodge traditional ideals of divinely prescribed natural family form. These may crumble eventually, but only if novel internal or external forces collude.

In all three cases mentioned above, only *the list of acceptable, natural ways of creating the religiously orthodox family* has expanded; *the structure of this traditional natural family* has been reinforced. ARTs shore up the ideals of heterosexual, procreative marriage and of women as mothers by nearly guaranteeing that they can be realized. Promoters of ARTs need merely convince religious people that ARTs support regnant understandings of the divinely-ordained nature of things, whether that is a nature that mainly sets limits (by outlining the boundaries of purity) or a nature that points toward some form of ideal realization that is practical, spiritual, or both. The argument's success absolves religious people from the responsibility to develop alternative ideals for holy childlessness for couples (and especially for women) while they paradoxically and simultaneously remind women and couples who remain infertile even after approved treatment that their childlessness is somehow also a product of God's will for them.<sup>85</sup> As a result acceptance of ARTs does not merely ratify existing beliefs about the clarity and continuity of the divine will but also narrows the criteria of adherence to this will in comparison with earlier periods. Several authors have noted this effect in communities where ARTs and newly-energized identity movements coincide (Kahn, 2000, 172–175; Inhorn, 1996, ch. 2; 2003c, 90).

<sup>84</sup>For more on local moral worlds, see Arthur Kleinman's work on the "commitments of social participants in a local world about what is at stake in everyday experience" (1995, 45).

<sup>85</sup>Inhorn notes that faithful adherence to restrictive religious guidelines for ARTs actually thwarts women's accomplishment of their religious ends. We argue that wherever this is true, the religion's pronatalism must not be *de jure* absolutely monolithic, even though it may be so *de facto* in local practice.

In Euro-American cultures fertility patients are less commonly explicitly concerned to adhere to religious law. Charis Thompson, who studied American infertility and the principle of privacy, noted that her subjects virtually never made any appeals to religious law that were directly relevant to their treatment decisions. On the other hand, she found that many subjects explicitly invoked religion during their infertility treatments (Thompson, 2005, 217–219; 2006).<sup>86</sup> Thompson sees this phenomenon as a product of the way America society organizes privacy, which encourages private acts of "meaning-giving" not only for all discrete experiences and events—in this case, for infertility generally—but for each decision and stage in treatment as well.<sup>87</sup> Religiously, private meaning-giving reflects the Protestant tradition of privileging the conclusions of a conscience formed in prayer, study, and consultation, as well as the tendency of American adherents of traditions with central authority (e.g., Roman Catholicism) to lean toward the Protestant end of their tradition's approach to moral law. It also reflects the tendency of religious Americans to give personal religious meaning to momentous events and decisions independently of the formal theological meaning that religious institutions may supply. Finally, in the absence of extreme economic and social pressure to procreate, some religious couples who reject the conscience model and whose traditions strictly forbid use of most ARTs may simply not investigate fertility treatment and so would not show up in a study like Thompson's.

Importantly, claims that God's will and power are at work in a person's body, in a clinician's work, or in a Petri dish do not have the same significance in all circumstances. In the orthodox Jewish, Muslim, and (perhaps to a lesser degree) Hindu cases, religious people and their religious authorities agree that God promotes procreation, limits the licit means and circumstances for achieving it, and is directly and intentionally responsible for each success or failure within these limits. Local communities within the traditions may disagree—and be aware that they disagree—over the exact content of these guidelines, but they do not disagree with the fundamental claim that God's hand is directly at work in each attempt at conception.

Similar statements about divine activity by Protestants who are members of so-called conservative communions would have comparable meanings. Conservative evangelical Protestants (e.g., adherents of the Southern Baptist Convention and the Assemblies of God), who tend to see God as active in the minute details of individual lives, also give the highest level of assent to the inerrancy of Scripture and the greatest weight to biblical norms in moral decision-making. But even for the many Protestant communions that have a more "hands-off" vision of God, Scripture is the primary touchstone for individual and communal moral discernment. We should

<sup>86</sup>See also Thompson (2006). Compare Greil (1989, 13): "My interviews with infertile couples indicate that such indifference to religious objections is widely shared. For the couples I have interviewed, practical concerns overshadow ethical concerns. These couples have one overriding goal: to become parents. They judge treatment options primarily on whether they are efficient and practical."

<sup>87</sup>Thompson (2005, 219).

expect to see ethical questions related to assisted reproduction framed in terms of the biblical vision for sexuality and reproduction.

The Lutheran Church—Missouri Synod, a conservative Protestant denomination, adheres to this model: “God’s word establishes as the appropriate context for procreation the loving relationship of husband and wife conceiving a child from their bodily lives as father and mother” (Missouri Synod, 2002, 18). This statement from a report on the ethics of cloning captures several typical features of Protestant approaches to reproductive technologies, both liberal and conservative. First, the starting point for weighing the ethical or theological significance of medical interventions into reproduction is God’s intention for procreation as revealed in Scripture. Drawing most often from the first part of the book of Genesis, Protestant analyses generally affirm marriage as the divinely sanctioned locus for procreation. Further, they frequently invoke a normative connection between sexual differentiation (as intentionally established by God’s creative activity), procreation, and marriage. Using language borrowed from Anglican theologian Oliver O’Donovan, Lutheran theologian Gilbert Meilaender explains the first axis of connection this way: “The creation story in the first chapter of Genesis depicts the creation of humankind as male and female, sexually differentiated and enjoined by God’s grace to sustain human life through procreation. Hence, there is given in creation a connection between the differentiation of the sexes and the begetting of a child” (Meilaender, 1997, 41–42; see also O’Donovan, 1984). The Missouri Synod report on cloning describes the second axis: “God has designed the procreation of a child to be a complex uniting of two similar but significantly different individuals whose union bears a new flesh that is rooted in but different from the flesh of the parents” (Missouri Synod, 2002, 16). In the context of a committed, enduring marriage sex achieves its dual function of uniting the partners and at the same time turning their love outward toward the world in the form of a new, unique life. Thus, writes Meilaender, “by God’s grace the child is a gift who springs from the giving and receiving of love. Marriage and parenthood are connected—held together in a basic form of humanity” (Meilaender, 1997, 42).

As we have seen already, this does not mean that Protestants uniformly refuse to separate sex and procreation, or even marriage and procreation. It is simply that Protestants take biblical models of family procreation as their starting point and draw analogies to them in order to justify deviations, cognizant that even their reading of the Bible is selective (for instance, few Protestants embrace polygamy, which is certainly a biblical model of family, or press St. Paul’s enthusiasm for celibacy). In addition, moderate and liberal Protestants leave most decisions about sex and procreation to the individual conscience, informed by scripture and communal moral reflection. Thus within these communions the faith that “God is powerfully at work” in a particular person or procedure is a statement of devotional confidence and personal conscience rather than a universalizable dogmatic assertion; it is likely to be met with polite respect but makes no normative claim on fellow churchgoers’ own fertility decisions.

There is one important further circumstance we have not explored. For singles and couples whose use of ARTs contradicts the teachings of a highly centralized

religious communion, the claim that “God is at work” in their treatment is both an act of resistance that constitutes a partial or even wholesale rejection of their tradition’s view of “natural” procreation and an appropriation of personal religious authority against the claims of the tradition to know and interpret God’s will and laws. It is, in this sense, an act of rebellion. Athenian women who freely employ abortion and donor IVF, Arab Sunni Muslims who travel to Shi’ite countries for treatment, and American Roman Catholics who use contraception and fertility treatment freely (not to mention single straight and single or partnered lesbian women and gay men of almost any tradition who conceive through ARTs) are in this sense claiming not only parenthood but also the ability to reinterpret and reform their own religious traditions.<sup>88</sup>

This phenomenon has been noted among Roman Catholics in Latin America. Elizabeth Roberts reports that Ecuadorian fertility patients and clinicians are absolutely devoted to scientific and clinical rigor and are also aware that the Roman Catholic Church opposes ARTs. Yet—much like the Indian Hindus, Arab Muslims, and Israeli orthodox Jews mentioned earlier—they insist that God is nonetheless present and active in all events. They consistently invoke God’s blessing at all stages of reproductive interventions, believing that God empowers their work and the work of science itself. Roberts sees this behavior “partially as a means to challenge Church condemnation of their practice” (Roberts, 2003; also 2006). Although Gwynne Jenkins does not draw any conclusions about resistance, she reports that Costa Rican fertility patients also interpret the particular ups and downs of infertility, fertility treatment, adoption, and conception as direct products of the divine will (Jenkins et al., 2002).<sup>89</sup> It is worth asking whether use of ARTs in conscious defiance of religious authority may not shift the understanding of the “natural” family—or of the source of its authority—slightly. To flaunt orthodox religious authority in order to create what would otherwise be a “natural” orthodox family is to erode the authority that originally reified that family model.

Liberal Roman Catholic responses to *The Instruction on Respect for Human Life in Its Origin and on the Dignity of Procreation (Donum Vitae)* hint at the beginning of such a shift—and give evidence that even in a highly centralized, apparently monolithic institution, authority structures are more complex than official documents might lead one to believe.<sup>90</sup> As we have seen, in its more or less blanket condemnation of assisted reproduction, the encyclical *Donum Vitae* invokes a “natural language of the body,” which sets the parameters for legitimate reproduction and gives a rationale for the Catholic Church’s insistence in its sexual ethic on the

<sup>88</sup> Of these traditions, worldwide Orthodox Christianity is for theological reasons decentralized, although all communions look to the Patriarch of Constantinople for leadership. However, particular communions within Orthodoxy may be highly centralized, especially—as in the Greek case—if they are national churches.

<sup>89</sup> See also Paxson (2004) and Kahn (2000) on the intimate, spiritually-charged relationships that develop between patients and clinicians in Israel and Greece.

<sup>90</sup> For a full discussion of the theology of *Donum Vitae*, see pp. 33–34 above.

inseparability of sex, reproduction and marriage. Critics of this document who question the inherent, created moral authority of the structure of the sexual body therefore also question the authority of the Roman Catholic Church to impose it as a norm. They have argued that *Donum Vitae*'s conclusions about what sort of practices are consistent with the character and dignity of human reproduction are drawn deductively from a narrow, "physicalist," deterministic reading of natural human sexuality and reproduction and uncritically enshrine as "nature" what may in fact be time-bound cultural customs. As theologian Lisa Sowle Cahill put it,

appeals to 'natural moral norms' [such as those made in *Donum Vitae*] seem to rigidify into moral absolutes human realities that either are the merely biological preconditions of human decisions (like the genetic code or the reproductive system) or are but culturally enshrined though nonnecessary patterns of decision and action (like feudal socioeconomic organization or patriarchal marriage) (Cahill, 1988, 11).

This development is particularly vexing for feminist theologians (Post and Andolsen, 1989; Traina, 1999). The difficulty of identifying "objective" human goods leads some Catholic moralists to reject the Church's official method of natural law reasoning altogether in favor of values such as "justice" and "responsibility" for judging what is fitting in reproductive interventions (Farley, 1983). Others, like Cahill, hold that it is possible to draw conclusions about what is normatively human in reproduction, but only through a process that is inductive, empirical, progressive, and provisional, rather than deductive and conclusive (Cahill, 1988, 13). In any case, even many Catholic moral theologians who defend the normative relationship between marriage and reproduction emphasize the marital relationship as a sexual-procreative whole rather than evaluate (as in the Vatican position) the morality of each potentially procreative act individually. Thus, they accept homologous AI and IVF as legitimate alternatives for realizing the human drive toward married generativity. A minority of Catholic theologians accept donor-assisted reproduction, arguing that the willingness and capacity to care for children, rather than biological relation, are the preconditions for truly good parent-child relationships (Lauritzen, 1993). Significantly, these same authors also depart from Roman Catholic teachings on gender and other issues on the basis of their claim that where the Church's moral reasoning is logically faulty, it carries no moral authority.

### 1.3.3 The Divine in and Against Nature

Clearly, it matters to what degree—and in which events—God is understood to be present, manipulating developments, and to what degree this intervention is seen as being "with nature" or "against nature." Even when nature is identified with physical process, the divine will may or may not determine its course in a particular moment. For example, the entrance of a particular sperm into a given ovum can be seen as divine anointing of a "winner," a sperm that will result in the specific child these particular parents were meant to raise (and the implantation of that ovum would be read as another signal; the miscarriage of the resulting fetus as another; etc.); as the

product of a divinely-designed process that usually, but not always, works in favor of fertility and health and therefore is susceptible to limited human assistance; or as a random event, and therefore fully open to human control for constructive purposes. These differences can lead to quite separate understandings of what occurs in fertilization and implantation; to separate assessments of the means and motives for "intervention" or "assistance" in nature; and therefore to very different explanations and evaluations of particular ARTs. In addition, it matters where the divine will is written (in scripture, and if so, in which passages; in human reason; in the structure and function of the human body; in answers received to petitionary prayer; in developed extra-scriptural tradition, etc.), as well as who is the authoritative interpreter (a large body of leaders who debate over many years; a single religious leader; the infertile couple; or the woman who seeks to conceive). Global cultural relations play unexpected roles. For example, in Japan ARTs, like all Western technologies, are greeted warily because of their association with "unnatural" Western individualism and self-seeking greed; the implication is that they must be naturalized and divinized by being turned to community-building ends (Lock, 1998, 215–216, 232–233). In this case the West is an unnatural anti-authority that throws the continuing power of traditional Japanese cultural values into relief.

In any case, clearly infertility inspires many religious people to make choices about which strands of their locally experienced religious tradition to choose as authoritative. These choices are usually (especially outside Euro-American culture) but not always in line with the forms of family structure that the traditions have promoted or called "natural." But these moments of decision are also (especially in Euro-American culture) often moments for the critical reevaluation of the religious tradition itself, and therefore for its transformation. Generally, however, the tradition is criticized and transformed on its own terms. For instance, liberal Catholics judge Roman Catholicism's current version of natural moral reason insufficiently rational. Finally, as many commentators have noted, religion provides people ways to find meaning, hope, and consolation in circumstances whose resolution is complex, outside human control, and to a great extent even beyond human understanding. Infertility calls for theodicy.

Finally, in nations in which there is either an official religion or a tradition with an overwhelming majority, the distinctions between religious and political debates often are either nonexistent or at least highly fluid, suggesting that "naturalization" is driven partly by political concerns. The identity of civil and religious law in Iran is the clearest example. The results of such influence are complex and sometimes surprising. Nia Georges notes that the Greek Orthodox Church in Greece opposed legislation that would have made artificial insemination legal, a proposal that would seem to have promoted the church's own emphasis on marital procreation. However, the church apparently objected not to the "unnaturalness" of artificial insemination but to a perceived connection between the legislation and interests that supported AID, IVF, and use of ARTs by unmarried women. The influence of legal thought on moral deliberation in Japan is another example. Yoshinao Katsumata points out that because few Japanese medical schools have departments of medical ethics, the task of medical ethics education falls to departments of legal medicine (Katsumata,



2000, 491). This state of affairs has profound influence upon the kinds of moral questions people raise. For example, in a democratic culture the basic legal question tends to be "What can we permit?" while the basic religious question is "For what shall we strive?"

### 1.3.4 *Eagerness or Reluctance of Traditions to Use "Nature" as an Interpretive Category*

It seems worthwhile to point out that the willingness of religious people and institutions to talk about the "naturalness" of ARTS has a great deal to do with whether, and how, the evaluation of human behavior is related to "nature." If "nature" is seen as a Western category with a content that is antithetical to religious values (Japan, e.g.) or that is insufficient for religious moral reflection (Western traditions of the "book"), or if it is seen as unredeemed/unredeemable (some Protestants), then "nature" will be used not at all or with qualifications. This strategy tempers the authority of science and medicine. On the other hand, sometimes the divine will and biological nature are seen as synonymous, in which case they may be friendly to some sciences but cautious toward technology, which is seen as potentially unnatural.

This conundrum might also be expressed as the question, at what level is the argument from "nature" authoritative when accounts seem to conflict? For instance, there is the microcosmic question about nature—by what biological process is it natural and acceptable to conceive a child?—and the macrocosmic one—how does reproduction fit in to the natural social order, and what is the latter? "Against nature" might also simply refer to anything that is empirically observed to harm flourishing—for instance, the increasing incidence of risky ART-related multiple births (Bryan and Denton, 2001). Strathern's observations about Western views of nature and kinship also explain reluctance to martial "nature" in arguments: not everyone regards scientific "nature" as the foundation of reality.

## 1.4 Conclusion

### 1.4.1 *Nature Contested*

As we have seen, the answer to the question, "how do religious people use 'nature' in their moral descriptions of infertility and ARTs?" has more answers than there are religious traditions, and even more answers than the number of religious traditions multiplied by the number of national cultural variations of each. Gender, class, education, position within the religious community, and a number of other factors also enter the equation. More revealing—and ultimately more useful to policymakers—is the process of tentative naturalization, divinization, and/or rejection

of these technologies within religious institutions and among religious laypeople. This process reveals religious people's finely shaded understandings of gender and kinship, the rank and order of their authoritative sources, the channels through which religious authority flows, and many other nuances that do much more to help us understand their likely responses to new technologies or to technological proposals than would the simple, material answer to the question, "are ARTs natural?"

However, if we were asked to draw a tentative conclusion from our work, we would say that in a competition between achieving the "natural" or acceptable family and using "natural" or non-technological means, in most cases the latter value gives way to the former. This suggests that religious people will eventually tend to support the use of ARTs for married, heterosexual couples. Our strong reservation about this trend is that in societies with uneven economic development and few opportunities for women, wide use of ARTs will not only entrench gender roles and gender inequality but likely even reduce the proportion of female to male births. Approval of ARTs in other cases may be less universal, although the American and Athenian cases suggest that an educated, cosmopolitan society will be willing to use ARTs to create other kinds of families. In all cases, however—whether ARTs are embraced or rejected—the scientific knowledge that ART research generates and ART debates disseminate alters religious descriptions of "natural" reproductive processes and the "natural" family.

### 1.4.2 *Policy Implications*

The foregoing study raises a number of important points for policy and for policy-making. First, a study of the moral statements of major traditions is not an adequate way to predict religious people's responses to ART policy proposals. To begin with, because most traditions do not create bureaucracies, not all have centralized discussions and publications of moral positions, and their members' moral opinions of ARTs are therefore varied. Second, not all traditions with bureaucracies are centrally concerned with bioethics or exhibit real unanimity on bioethical questions. Third, not all religious people are members of the "big traditions." Fourth, in some cases official religious teaching is local—a rabbi, or imam, or head of an autocephalous Eastern Orthodox communion may speak to and for a community of adherents. Yet—fifth—even the local mores generated by this local moral world are rarely applied literally and inflexibly. Religious advisers, and often religious people themselves, often adjust them pastorally in order to relieve suffering and preserve relationships in quite particular personal circumstances formed by dynamic relationships among factors like the following: official religious teaching; cultural views of gender; cultural views of marriage; economic relationships; political relationships; social relationships; class and race; expectations of levels and kinds of available health care. Finally, in these processes of interpretation and adaptation, we see distinct but related processes: *communal* (*de jure* and official, either local or global), *individual*, and *collective* (*de facto*, but acknowledged and widespread, common patterns of decisions by individuals in a tradition) transformation of ideas of what is "natural" with regard to reproduction.



The implication for policymakers is that although religious organizations sometimes lobby, adherents of religions do not follow their leaders docilely on this issue (see Thompson, 2006, 2005; Paxson, 2004; Greil, 1989). Examination of one tradition's official teachings or consultation with another's leader will not provide a reliable measure of individual adherents' support for particular policies. These investigations are of very limited usefulness. They can only alert policymakers to the kinds of goals people from particular religious backgrounds may be especially interested in pursuing or provide a context for the arguments and objections they may be raising.

A second lesson is that in both ethics and policy mention of "nature" or the "natural" is not an argument in itself. References to "nature" raise more questions than they answer, as the meaning of the word varies according to the religious and cultural world of the speaker and sometimes varies for the same person depending on the precise question asked. "It's natural" marks the beginning, not the end, of the search for moral understanding.

A more substantively helpful consequence of this investigation is that it provides a clearer understanding of the process by which ART procedures that apparently contradict some religious commitments nevertheless win the support of religious people. We have argued that reproduction is so tightly bound with religious identity and religious ideas of the natural that religious people's decisions about ARTs are rarely revolutionary or discontinuous with tradition. Rather, their decisions exhibit *subversive continuity* with accepted traditions. That is, religious people are willing to transform some of their deeply-held assumptions about nature significantly, but they do so by preferring or even absolutizing other equally traditional assumptions about nature. We argue further that when push comes to shove these decisions most often permit alteration of "natural" biological processes in favor of preserving "natural" family and social relations. Thus policy innovations phrased to support religious visions of the "natural family" are likely to be better received than those that openly embrace its erasure. As the chart below shows, not even the "great traditions" embrace identical reductive definitions of the natural family, but secondary concerns about proper procreation create significant practical overlap in a practical benchmark: heterosexual, two-parent families with biologically related children.

Religious tradition	Reductive core of the "natural family" <sup>91</sup>
Hinduism, Confucianism	Father and son
Judaism	Mother and child
Roman Catholicism, Eastern Orthodoxy	Husband and wife, bonded by God (children anticipated and desired; childlessness does not invalidate marriage)
Islam, Protestantism	Husband and wife, bonded by God through children
Buddhism	Depending on local traditions, husband and wife (children optional but anticipated and desired)

<sup>91</sup> We did not explore, but think it worth asking, whether traditions that strongly support vocational vowed celibacy as an alternative to marriage view ARTs differently than those that do not.

Finally, as we have already indicated, intent is not result: even policies designed to shore up the "natural" family will transform it subtly. ARTs will often produce unintended consequences when applied within local moral and religious frameworks. We have already alluded to probability that in more affluent settings liberal ART policies will have paradoxical results: policies originally intended primarily to help married women to realize motherhood will lead to an expansion of intentional single motherhood, and policies that invite openly gay and lesbian couples to become parents through ARTs will end up supporting the traditional ideal of the two-parent nuclear family. These secondary results in turn may encourage a tertiary consequence: in both cases ARTs encourage a subtle privileging of biological or gestational relatedness over social parenting, implicitly jeopardizing cultural acceptance of adoption. In less affluent settings, these unexpected consequences may be a bit more insidious; for example, we noted above the (in this case unrealized) fear that in Egypt the advent of ICSI would create an epidemic of divorce, depriving women of social standing and livelihood (Inhorn, 2003b, 251–252). In all cultural settings, widespread availability of ARTs puts pressure on couples—and in particular on women—to attempt increasingly expensive treatments with decreasing chances of success. As Arthur Greil warned nearly two decades ago, acceptance of one's own infertility used to be a virtuous, humble act of resignation; now it is in danger of becoming evidence of laziness or selfish willfulness (Greil, 1989, 13). Assisted reproduction could become morally mandatory.

Thus despite cautions that first-wave feminists may have overreacted when they condemned ARTs for reinforcing patriarchy, we believe that in most cases religious conversations about ARTs fall short by ignoring just this sort of critique.<sup>92</sup> These conversations tend either to focus on the "natural" biological reproductive process and the "natural" family abstractly and universally or to address individual situations in their personal, concrete detail. This double focus on the universal and the particular obscures crucial moral questions that arise at the intermediate level of analysis: social justice concerns about gender, racial, and economic stratification of demand and of availability and quality of service; reservations about the commercialization of fertility services; questions about women's reproductive freedom and autonomy in health care; and questions about unjust uses of technology for (for example) purposes of eugenics or sex selection. Policy makers have a responsibility to keep larger social patterns and justice considerations, both local and international, before the public and not to permit the debate to circulate only around the foci of abstract "nature" on one hand and wrenching intimate accounts of unwanted childlessness on the other.<sup>93</sup>

<sup>92</sup> This is not to imply that all religious conversations about ARTs ignore justice. See for example Ryan (2001).

<sup>93</sup> Class, above all, is important here (see, e.g., Jenkins, 2002). For example, if infertility is less often interpreted through patriarchal lenses in the United States and Europe than in the developing world, that is due not to their predominantly Christian religious heritage but to the existence of a proportionately larger upper-middle and middle-class population, in which both women and men can afford to be freer in their vocational and reproductive choices. Indeed, if recent predictions about the spread of Christianity in the poorer cultures of the southern hemisphere and Asia bear out, Christianity will again provide religious justifications for patriarchy (Jenkins, 2002).

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