In 1978, when doctors introduced Louise Brown, the first “test tube” or in vitro fertilization (IVF) baby, to the world, the international media hailed the event as something just short of the definitive answer to infertility. In Time magazine, Dr. Robert Edwards—one of the brains behind Baby Louise’s birth and the acknowledged godfather of the assisted reproductive technology (ART) industry it spawned—boasted: “This is the first time we’ve solved all the problems at once. We’re at the beginning of the end—not the end of the beginning.”

Now, more than three decades later, a critical look at the direction of the ART industry’s agenda and actions leaves Catholic observers with several troubling ethical and medical questions that might be summed up as: “Where will it all end?”

Coming precisely one decade after the publication of Pope Paul VI’s prophetic encyclical, Humanae Vitae, the initial Catholic response to Baby Louise was ambiguous. Just days before being named Pope John Paul I, Albino Luciani expressed his “best wishes to the baby,” suggesting that the parents may “have great merit before God for what they have decided on and asked the doctors to carry out.”

Many Catholic scholars, scientists, and laypersons adopted sentiments similar to those of the pope, only without the helper verb, “may.” Unencumbered by meaningful opposition, the ART industry, a consortium of researchers, medical school professionals, pharmaceutical companies, and others, formed an unofficial alliance with the secular media and quickly evolved into a formidable and profitable presence worldwide.

As IVF births mounted, media out-
lets recognized and satiated the public’s appetite for heartstring-tugging stories about infertile couples who were finally able to achieve pregnancy and live birth via the “miracle of IVF.” Multi-birth pregnancies and grateful moms and dads holding their smiling IVF triplets, quads, quints, or more made for great TV. ART publicists were only too happy to supply IVF doctors and other medical professionals who delivered appropriate soundbites. To the casual viewer on the outside looking in, the medical world had, indeed, solved the problem of infertility.

**ON THE CUTTING ROOM FLOOR: THE IVF PROCEDURE**

Cultural attitudes and perceptions of IVF, formed in large part by the media, are long on images of darling IVF children and short on information about the impersonal IVF procedure itself, which is rarely—if ever—described in detail.

Here’s the basic process: oocytes, or human eggs (obtained surgically from the wife’s ovarian follicles in drug-induced, super-ovulated cycles) and prepared sperm (previously collected from the husband, usually through masturbation) are brought together in a petri dish in the laboratory. Fertilization, if it is successful, takes place in that dish in a lab—that is, outside the woman’s body and any act of sexual union between the couple hoping to conceive. Next, three or more blastocyst-stage (five-day old) embryos are placed in the uterus through a process called embryo transfer. Less robust-looking embryos are either destroyed or cryofrozen at -320 degrees Fahrenheit in liquid nitrogen: for possible future implantation or use in embryo-destructive research.

The average cost for a single, basic cycle of IVF in the US is about $12,000. Success rates, a hotly debated topic even within the ART industry, vary widely according to a number of factors, most notably the age of the woman. The latest available data (2008) from the Centers for Disease Control (CDC) place IVF success rates (measured by numbers of live births) for women between the ages of 35 and 37 at 37.4 percent; women 38-40, 28.2 percent; women 41-42, 16.5 percent; women 43-44, 7.8 percent; and women 44 years or older, 2.8 percent. About six out of every ten IVF procedures are performed on women age 35 or older.

Today, after the birth of more than four million IVF children worldwide, the procedure is looked upon as commonplace, even routine. The most recent data available from the CDC shows IVF procedures in the US have doubled over the past decade, with 475 IVF clinics performing nearly 150,000 “cycles” of IVF annually.

IVF stories in the media, including TV reality shows, continue to generate good audience ratings. But in recent years a number of new, unscripted storylines have begun to emerge, revealing the darker, unsettling underbelly of the ART industry and its practices.

A sampling of these revelations includes:

- Unemployed single mother Nadya Suleman of California gained worldwide notoriety in January 2009 as the “Octomom”—giving birth to eight IVF babies—after a Beverly Hills doctor transferred 12 human embryos to her uterus. It appears that Suleman’s children are the world’s longest-surviving set of octuplets. They joined the six children Suleman had already given birth to through previous IVF procedures. All 14 births were from the same physician, whose medical license was eventually revoked. Although a spokesman for the American Society of Reproductive Medicine (ASRM), the chief advocacy group of the ART industry, condemned the event as a violation of ASRM guidelines for embryo transfer, an Associated Press story revealed that less than 20 percent of IVF clinics in the US follow the guidelines, which do not carry the force of law.


- The connection between sperm banks and IVF clinics drew scrutiny after an article titled “One Sperm Donor, 150 Offspring” appeared in the *New York Times* (September 5, 2011). In the article, writer Jacqueline Mroz chronicled the myriad potential health and ethical concerns surrounding sperm donation, including the case of one sperm donor who “fathered” 150 children (with more on the way), all of whom are half-siblings. The possibility that genes for rare diseases could be spread throughout the population and the increased odds of incest between half-sisters and half-brothers who live in close proximity to each other but are unaware of their blood relation are just some of the potential problems arising from a largely unregulated sperm-donation industry.

- Two recent documentaries highlight other little-known health consequences of IVF. *Eggsploitation* (2010), produced by the Center for Bioethics and Culture, earned high praise from across the political and cultural spectrum for exposing what the film calls the IVF...
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With regulation of the IVF industry virtually nonexistent in the US, it is estimated that a stockpile of some 500,000 human embryos—labeled as "spares"—are now in a cryopreserved (frozen) state. Moving toward "designer babies," IVF specialists are marketing and promoting the use of prenatal genetic diagnosis to scan and test chromosomes of IVF embryos, allowing for the elimination of those nascent human beings with less-than-desirable genetic traits.

These and other revelations represent merely the tip of the IVF iceberg. With regulation of the IVF industry virtually nonexistent in the US, it is estimated that a stockpile of some 500,000 human embryos—labeled as "spares"—are now in a cryopreserved (frozen) state. Moving toward "designer babies," IVF specialists are marketing and promoting the use of prenatal genetic diagnosis to scan and test chromosomes of IVF embryos, allowing for the elimination of those nascent human beings with less-than-desirable genetic traits.

Same-sex parenting—egg donation and surrogacy for gay men, sperm donation and intrauterine insemination and IVF for lesbians—is on the uptick. Assisted Human Reproduction Canada, a federal regulatory agency, reports that three out of every five demands for assisted reproduction in that country come from same-sex couples. As same-sex marriage and surgery for transgendered persons gain political and anti-family protocols that are given in the field of human reproduction and nascent life, but is in fact leading the charge for such practices and procedures:

- "The Embryo’s Out-of-Body Experience" is one session title at the 2011 conference of the Progress Educational Trust, which is being held in London this November and which is sponsored by international biopharmaceutical giants Merck Serono (Germany) and Ferling Pharmaceuticals (New Jersey). The "out-of-body" language challenges attendees to consider the question of which environment is best for the newly created embryo: the mother’s uterus, or a petri dish. A session called "Making the Grade," offers guidance on selecting embryos for transfer based on established guidelines, which—given the frequency of selective reduction—can’t be good news for those embryonic human beings determined to be less desirable than their siblings. Conference speakers include a sympathetic columnist from the Guardian and Simon Fishel, Ph.D., a former colleague of Dr. Robert Edwards whose achievements include appointment as deputy scientific director of the world’s first IVF clinic at Bourne Hall, Cambridge.

- The title of an Australian science symposium associated with the World Congress on Human Reproduction speaks volumes: "When Starting a Family Takes More Than Two." Other symposium topics include "Are the Kids Really All Right—What Happens When the Donor Families Link Up?", "Family Structures are Changing More Than You Know," and "Does Sperm Donation in Australia and New Zealand Have a Future?" The World Congress on Human Reproduction’s provocative theme for 2011 is "Making Babies: Is It Just Chemistry?"

- A veritable Who’s Who of prestigious US research universities and reproductive institutions will be represented at the November 2011 meeting of ASRM in Orlando, titled "Realizing Scientific Dreams." Among the post-graduate sessions: "Fertility and Family Building in the Transgender Population," a one-day course exploring "gender identity dysphoria/disorder, its diagnosis and management, and special needs of transgendered individuals seeking ART." Two Yale Medical School professionals will lead a symposium titled "Two Moms, Two Dads: Same-Sex Couples and Assisted Reproduction." Alan E. Guttmacher, MD of the Guttmacher Institute (the research arm of Planned Parenthood) will offer thoughts on "Future Directions in Reproductive Research." Other sessions cover embryo selection, mandated insurance coverage for ART, and tips for acquiring embryonic stem cells. Mental health professionals will look at "Assessing Books for Donor-Conceived Young Adult Readers." Attendees will investigate the ethics of posthumous reproduction. A major conference highlight will be "Con-
traception Day,” featuring a keynote address titled “Let’s Get Serious: Evidence Clearly Suggests What Could Be Done to Diminish Unintended Pregnancies,” and an interactive debate on “Adolescent Contraception: Depo-Provera vs. IUDs” presented by—whom else?—the ASRM’s Contraception Special Interest Group, of course.

Corporate sponsors play a key role at the ASRM gathering, with pharmaceutical companies like Merck and Pfizer among the “Ruby Level Supporters,” donating at least $100,000 in exchange for high visibility among attendees. The ASRM is recognized by the Internal Revenue Service as a 501 (c)(3) non-profit corporation, with total revenue in 2010 of more than $9 million, and total assets exceeding $30 million.

**HUMAN SEXUALITY, PROCREATION, AND HEALTH CARE THROUGH THE ROMAN CATHOLIC LENS**

There is a profound contrast between current mainstream approaches and solutions to infertility and reproductive health and that of a relatively small but growing group of medical surgeons and other professionals trained within a Catholic ethos. While much of the popular perception of Roman Catholic thinking on sexuality tends to focus on the Church’s opposition to abortion and artificial birth control—important tenets to be sure—it is hardly the complete story.

In 1985, Dr. Thomas W. Hilgers and his wife Sue, inspired by the message and call of the papal encyclical *Humanae Vitae*, decided to establish the Pope Paul VI Institute for the Study of Human Reproduction. Since that time, the Omaha, Nebraska-based Institute has become the epicenter for medical and surgical approaches to infertility that conform to the Catholic Church’s vision of the value of human life and human procreation.

Driven by the Church’s age-old vision of the human person, human sexuality, and marriage, the institute has developed the women’s health science known as NaProTechnology (natural procreative technology, or NPT) as the “small-c Catholic” (universal) and “capital-c Catholic” answer to infertility, touting success rates that are one-and-a-half to three-and-a-half times higher than various methods of IVF.

The “hub” of NPT is a natural method of family planning—the Creighton Model FertilityCare System (CrMS)—that provides couples with fertility information to help them pursue their goal of conceiving babies of their own. The system teaches the woman to observe and chart cervical discharge, known as a “bio-marker,” throughout her cycle.

With this information, the woman and her husband know their window of fertile days, allowing them to direct their acts of intercourse to the days that optimize chances of achieving a pregnancy.

More than just a roadmap to days of fertility, medical data from the couple’s charts also serve as a diagnostic tool for NPT-trained physicians, helping them identify many underlying diseases and conditions. These are not just related to infertility, but include a range of women’s health issues such as recurrent miscarriage, premature birth, post-partum depression, and much more.

Many NPT-trained doctors can also provide medical and/or surgical solutions to infertility and other health problems. These procedures are all done in the context of protecting human life and the dignity of the conjugal act that leads to human procreation. In all of these respects, NPT is not only effective in its medical and surgical approach to infertility, it is also superior to other reproductive treatments in its ethical perspective.

**CULTURE CLASH**

The desperation experienced by couples seeking solutions to infertility, combined with the seductive marketing of ART alternatives and a lack of solid catechesis, very often pushes Catholic moral and ethical concerns regarding fertility treatments to the background—if they are considered at all.

If society’s moral infrastructure rests squarely on the foundation of the family, then appraising the moral character of the means by which couples build those families takes on critical individual and social importance. NPT protocols assist couples struggling with fertility “to procreate in full respect for their own personal dignity and that of their child to be born” (in the words of the Vatican’s 1987 instruction on human life, *Donum Vitae*).
In nearly every aspect, ART's goals and protocols do not pass this test, nor do they even try to do so. The Catholic vision of sexuality and procreation is, in almost every way, a polar opposite of the secular, IVF-based vision. The result is a clash of competing cultures with emotionally vulnerable couples trapped in the middle.

Catholic norms for building a family did not develop in a vacuum and are derived directly from the Church's comprehensive vision of the human person—rooted in reason, confirmed and enriched by faith. The good news, then, is that couples seeking to realize the laudable goal of conceiving babies of their own can use these norms as guideposts directing them to a good means of achieving that goal: an infertility treatment that promotes the values of human life and human procreation.

Four norms pertaining to infertility treatment follow from this "small-c" Catholic (and Roman Catholic) vision of human life and human dignity:

- Infertility interventions must respect the inviolable integrity of a newly developing human life in vitro or in utero;
- spouses do not have a right to a child. Children are, and must be viewed as, a personal gift, the supreme gift of marriage;
- human dignity demands conception, not production of new human beings; and
- a child has the right to be conceived within marriage.

There is an inherent absurdity about reproductive technologies such as IVF that bring life through death. Couples are informed by IVF specialists as to which embryos should be transferred, which should be cryofrozen (possibly to be donated for embryonic stem cell research, which destroys the embryo), and which should be discarded.

The higher number of multiple births that occurs with IVF invites the practice of selective reduction as the pregnancy enters the second trimester. For those babies that do survive, there is a commensurate higher risk of premature birth, often a precursor to abnormal motor and mental development.

Conversely, NPT treatments for infertility respect the right to life and bodily integrity of gestating babies—human beings in utero. NPT protocols not only do nothing to destroy a new human life—they do a good deal to facilitate a healthy, full-term pregnancy.

IVF providers and users demonstrate an overtly utilitarian outlook. Infertile couples, in their minds, have the right to reproduce in any way they please and to conceive their own babies in the easiest, most expedient way they can. IVF specialists reduce parents to suppliers of fertilization material and reduce the baby to an end-product, manufactured and controlled by technology.

NPT's approach to infertility, by contrast, encourages couples to work cooperatively with nature and to respect their own human dignity, and that of their unborn child.

Couples who have been treated successfully for infertility through NPT, and conceive as a result, do so within their own acts of intercourse, that is, within the only context worthy of the conception of a new human being.

Serious discussions referencing any rights of an IVF child—particularly whether that child has a right to be conceived in a natural way—are virtually nonexistent. In the world of IVF and embryo transfer, the desires of the parents trump all.

Since NPT assists the couple in conceiving a child within their own acts of sexual love, this approach to infertility also encourages parents to appreciate and respect the rights of their children, which follow directly from their dignity: to be conceived within, and therefore to be connected to, the protection, security—and yes, intimacy—of their parents' bodily union and marital love.

A GLOBAL STRUGGLE: THE IVF INDUSTRY VS. NAPROTECHNOLOGY

Propelled by favorable media coverage, deep-pocketed multinational pharmaceutical allies, and burgeoning demand driven by the instinctively holy, natural desire of couples to bring children into the world, the IVF industry shows little sign of subsiding. The issue for Catholics is how best to respond to this increasingly aggressive assault by the mainstream medical community on the dignity of human life, marriage, and the natural procreation of children.

For perhaps the first time since Baby Louise, a viable, medically superior alternative is available for not only Catholics, but anyone willing to consider an effective approach to reproductive medicine that differs from the mainstream. And Catholic medical professionals are using this knowledge to engage mainstream medicine on an intellectual and scientific level in the United States and around the world.

Poland, the homeland of Blessed John Paul II—a strong supporter during his pontificate of Dr. Hilgers, NPT, and the Pope Paul VI Institute—is emerging as one battleground in the IVF struggle.

After making presentations in late September 2011 to the Polish Society of Perinatal Medicine, Dr. Hilgers engaged that country's leading IVF doctor, obstetrician/gynecologist Marian Szamatowicz, in a debate before dozens of physicians about the merits and safety of IVF. Hilgers' trip to Poland was made partly in response to more than a dozen Polish medical professionals who journeyed to Omaha for an intense week of NPT education and training, part of the largest training class in the Pope Paul VI Institute's history.

The Pope Paul VI Institute has become an international destination for physicians and other medical professionals seeking NPT training. In July 2011, the fourth class of fellows graduated from the Pope John Paul II Post-Graduate Fellowship in Medical and Surgical NaProTechnology. These and eight other graduates are practicing NPT surgical techniques throughout the United States. Two fellows have been accepted into the 2011-2012 class.

Although the medical and surgical practice of NPT continues to grow in popularity, Dr. Hilgers and those connected to the Pope Paul VI Institute are under no delusions about what they are up against.

However, "Building a culture of life in women's health care," the mission of the Pope Paul VI Institute, is not a quixotic exercise—at least not for those physicians, practitioners, and most importantly the couples who have been touched by this emerging reproductive health science. How deeply NPT impacts the secular culture, and an IVF industry spiraling out of control with an "anything goes" mentality, remains to be seen.

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