Bioethical and Moral Perspectives in Human Reproductive Medicine

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Abstract

A reductive reading of *Humanae vitae* seeks to limit its appeal to a ban on contraception. In truth, however, it offers a vision of human sexuality and conjugal love with broad and enduring relevance. In setting forth the intrinsic complementarity and irreducibility of the unitive and procreative dimensions of the conjugal act, Paul VI has given us a hermeneutical key for assessing many contemporary ethical dilemmas in human reproductive medicine. From this perspective, this article seeks to apply the logic of *Humanae vitae* to several real-life scenarios confronted by medical practitioners, educators, and ethicists working in the field of fertility and reproductive health. These include a consideration of the ethics of prescribing hormonal contraceptives, the possibilities of investigating male infertility, issues of cooperation in counseling and assisting conception in same-sex relationships, the ethics pertaining to assisted reproductive technology (ART), the contested case of prenatal adoption, and the application of double-effect reasoning.

Summary: On the occasion of the fiftieth anniversary of the promulgation of Pope Paul VI's encyclical *Humanae vitae*, this article seeks to defend its enduring relevance to modern-day society, through application of its reasoning to contemporary dilemmas in reproductive medicine. It considers real cases of the ethics of prescribing hormonal contraceptives, of investigating male infertility, of cooperating in counseling and assisting conception in same-sex relationships, of ART, of prenatal adoption, and the application of double-effect reasoning.

Keywords

Bioethics, Bioethics of contraceptives, Embryo adoption, Ethics of reproduction, Fertility awareness, Human reproduction, Infertility therapies, NFP, Principle of double effect, St. John Paul II

Introduction

Fertility of a couple relates to the ability of a man and woman to attain a pregnancy and the woman to sustain that pregnancy. Advances in technology and medicine have delivered considerable health benefits but have also pushed the limits of ethical practice in the field of human reproduction. Corresponding to such advances have been semantic interpretations and changes in terminology, which serve both subjective scientific and moral purposes. For example, the biological definition of human

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conception refers to fertilization of an oocyte by a spermatozoon resulting in a zygote—the beginning of a new and distinct human life (Miller and Pruss 2017). It has been argued that conception may also refer to a pregnancy “beginning with implantation of an embryo in a woman” (Zegers-Hochschild et al. 2017, no. 403), promulgating an earlier and erroneous but now widespread definition that conception begins at implantation rather than fertilization (American College of Obstetrics and Gynecology 1965). In the age of assisted reproductive technology (ART), one definition of “fertility” is “the capacity to establish a clinical pregnancy” (Zegers-Hochschild et al. 2017). This definition allows for extracorporeal manipulation of gametes and fertilization, with conception and thus clinical pregnancy attained at subsequent implantation of the embryo in the womb. The voracity of arguments on either side of such definitions attests to the importance of fertility and bearing of offspring in our society. For the purpose of this discussion, conception is accepted as being from the formation of the zygote from two gametes and thus the inception of a distinct new life.

One of the most profound intersections of theology and reproductive medicine is found in *Humanae vitae* (Paul VI 1968), which is regarded as the catalyst for the field of natural family planning or what is increasingly being referred to generically as the fertility awareness-based methods (FABMs). *Humanae vitae* has inspired the development and spread of validated and morally acceptable techniques such as the Billings ovulation method (Billings, Corkill, and Marshall 2008), Creighton Model System (Hilgers and Stanford 1998), Symptothermal method (Frank-Herrmann et al. 2007), and the Marquette method (Doroski 2014).

These FABMs of family planning are not simply a means of conforming to Paul VI’s (1968) reiteration of the Church’s prohibition of “any action which either before, at the moment of, or after sexual intercourse, is specifically intended to prevent procreation—whether as an end or as a means” (no. 14). Rather, they find their rationale in the very reasoning for which the Church deems contraceptive intercourse to be inconsistent with conjugal love.

Married love particularly reveals its true nature and nobility when we realize that it takes its origin from God, who “is love,” the Father “from whom every family in heaven and on earth is named.” . . . As a consequence, husband and wife, through that mutual gift of themselves, which is

specific and exclusive to them alone, develop that union of two persons in which they perfect one another, cooperating with God in the generation and rearing of new lives. (Paul VI 1968, no. 8)

Conjugal love that is self-giving and open to life is a witness to Divine Love—a love that is never impotent or sterile, never a partial gift of Himself, but his everything. This has a particular dignity of spousal love. Contracepted intercourse, on the other hand, constitutes a muted witness to love: a situation that “does not correspond to the interior truth and to the dignity of personal communion—*communion of persons*” (John Paul II 1984, no. 7). As St. John Paul II writes in *Familiaris consortio*:

When couples, by means of recourse to contraception, separate these two meanings that God the Creator has inscribed in the being of man and woman and in the dynamism of their sexual communion, they act as “arbiters” of the divine plan and they “manipulate” and degrade human sexuality—and with it themselves and their married partner—by altering its value of “total” self-giving. Thus the innate language that expresses the total reciprocal self-giving of husband and wife is overlaid, through contraception, by an objectively contradictory language, namely, that of not giving oneself totally to the other. This leads not only to a positive refusal to be open to life but also to a falsification of the inner truth of conjugal love, which is called upon to give itself in personal totality. (John Paul II 1981, no. 32)

The same cannot be said of FABMs. Through period abstinence and recourse to infertile periods, they preserve the truth of self-giving love. This self-sacrificial conjugal union may achieve or avoid a pregnancy, but couples who utilize FABMs “respect the inseparable connection between the unitive and procreative meanings of human sexuality, they are acting as ‘ministers’ of God’s plan and they ‘benefit from’ their sexuality according to the original dynamism of ‘total’ self-giving, without manipulation or alteration” (John Paul II 1981, no. 32).

From a theological perspective, marriage as a divine gift (Paul VI 1968, no. 8) is complete in the three goods (Augustine 401), espoused by the marital act:

1. *Fides*: the faithfulness, intimacy, and companionship shared by the married couple,
2. *Proles*: the fruit of children and family, and
3. *Sacramentum*: the sacramental/covenant nature, its transcendent aspect, and indissolubility in the eyes of men and God (Paul VI 1968, no. 9).

Processes and actions which intentionally separate these goods then become morally illicit from a theological perspective. Positively expressed, when the unitive and procreative qualities of a marriage are preserved, “the use of marriage fully retains its sense of true mutual love and its ordination to the supreme responsibility of parenthood” (Paul VI 1968, no. 12).

This article discusses the clinical application of these theological and bioethical principles in human reproductive medicine with illustration by several case examples. The cases and their resultant moral and ethical discussion points have been drawn from the Restorative Reproductive Ethics Seminar at the National Fertility Conference 2014 and Bioethical Issues in Reproductive Medicine session at the National Fertility Conference 2016 held in Melbourne, Australia. This case-based discussion aims to assist clinicians to understand and manage analogous clinical scenarios in the light of *Humanae vitae*.

Double-Effect Reasoning

Clinicians are continually faced with balancing the indications and benefits of a treatment, on the one hand, and the anticipated side effects and possible adverse reactions, on the other. That commonly used distinction has important moral and ethical significance. The treatment goal of the clinician needs to be balanced with their responsibility for ensuring that the risks are not disproportionate or overly burdensome. With respect to treatments that have unethical or immoral dimensions, the obligation of the clinician is ideally to avoid cooperation with what is evil. For the purpose of this article, “ethics” refers to a person’s distinction between what is right and what is wrong, whereas “moral” denotes reliance or consistency with accepted teaching of the Catholic Church.

Classically, philosophers and theologians reasoned that “moral acts take their species according to what is intended, and not according to what is beside the intention, since this is accidental” (Aquinas 1274). A clinician is morally responsible for what they directly intend and in that respect ought not do evil. But where doing good for a patient also

has side effects and risks adverse reactions, they need to be assessed beside the intention. It is wrong to deliberately choose to do harm, but harm can result as a side effect, provided it is not directly willed and it is not disproportionate.

In double-effect reasoning, conditions to be met include that (1) the action in itself from its very object must be good or at least indifferent, (2) the good effect and not the evil effect must be intended, (3) the good effect must not be produced by means of the evil effect, and (4) there must be a proportionately grave reason for permitting the evil effect (Haas 2017).

Case 1: Moral Decision-Making during Caesarean

Kylie is a 30-year-old woman with four healthy children who is booked towards the end of her fifth pregnancy for an elective caesarean section. She requests a bilateral salpingectomy at the time of her caesarean, citing a desire to reduce her risk of ovarian cancer.

Kylie has been made aware that opportunistic salpingectomy is currently acceptable practice for primary prevention of high-grade serous carcinoma (Oliver Perez et al. 2015). In applying the principle of double effect to Kylie’s situation, primary prevention of carcinoma is a morally acceptable object (condition 1), but bilateral salpingectomy effectively renders her sterile (the double effect). Examining the proportionality of these effects (condition 4), the weight of mitigating a potential risk in which a serious pathology (ovarian cancer) is yet to have been confirmed to exist would not justify the known destruction of bodily integrity and reproductive function entailed in a bilateral salpingectomy. If, on the other hand, there was known current and serious tubal or ovarian pathology, the proportionate reason for performing a salpingectomy/oophorectomy may then be examined for sufficiency to justify performing the procedure (condition 4). Undertaking opportune tubal ligation or bilateral salpingectomy at caesarean for the purpose of contraception would not fulfill the criteria for legitimately applying the principle of double effect since the intention would be to disrupt the procreative capacity of the woman (condition 2).

Other philosophers have noted that the concept of proportionality proposed by Aquinas did not involve the concept of comparatively lesser evil or greater good nor quantification of the overall net outcome.

The proportionality only required that the action responsible for causing foreseeable harm must be no more harmful than would be necessary in that particular context (Finnis 1991). For Kylie, examination of the means to reducing her risk of ovarian cancer should consider which adverse and unintended consequence (destruction of bodily integrity and reproductive function) would be the least evil of those that are foreseeable and are equally available.

Hormonal Contraception

Regarding the bioethics of contraceptives, the use of hormonal treatment for a medical condition does not present an ethical dilemma in itself. Provided there is informed consent and a reasonable proportion of the benefits of the therapeutic treatment over the risk of adverse effects, hormonal treatment for a condition may be both warranted and recommended. Complicating hormonal medications, whether delivered orally or via a drug-eluting device, is their effect on the fertility of a woman and their capacity for both contraception and postconception termination.

Hormonal contraception is commonly presented as the oral contraceptive pill (OCP) containing a progestogen with or without an estrogen (often termed combined oral contraceptive pill [COCP] in the case of the former, denoting a combined OCP), an implanted etonogestrel-releasing device, an intrauterine contraceptive device (IUCD) containing levonorgestrel, a depot injection of medroxyprogesterone acetate, and the contraceptive vaginal ring containing etonogestrel and ethinyl estradiol. There are three mechanisms of action for hormonal contraceptive formulations and devices, including (1) suppressing ovulation, (2) changing the characteristics of the cervical mucus thus preventing or inhibiting sperm transport to the fallopian tubes, and (3) altering the maturation of the endometrium thus potentially causing any conceptus formed to be unlikely to successfully implant (Frye 2006). IUCDs are also known to invoke an inflammatory response which further inhibits sperm as well as the ability of a conceptus to implant in the uterus. The third mechanism described above is a postconception effect (postconception contraception) and may be considered an induced preimplantation abortion, which is intrinsically ethically evil (Grisez 1997d). This loss of human life in the case of the third mechanism coming into play is likely to raise significant questions about whether the loss of life is directly willed. If considered not to be directly willed, the issue of proportionality may still be an issue. Is the loss of life disproportionate to the good that the woman is

seeking to achieve? This will depend on whether there are alternatives that do not involve that loss of life. Some couples may wish to utilize such former therapeutic options while continuing to monitor for signs of fertility where possible, thus recognizing the unitive and procreative dimensions to their relationship while reducing the likelihood for potential harm.

Clinical Perspectives on the OCP

With respect to double-effect reasoning in managing medical conditions such as heavy menstrual bleeding or severe acne, it may be considered an appropriate option to prescribe hormonal contraception if there were no other reasonably available treatments. The purpose would not be contraception but instead to treat the presenting medical condition. However, it is still important to assess the overall consequences for the patient of suppressing fertility and the other harmful effects, such as masking underlying chronic disease including polycystic ovarian syndrome (PCOS), increased risk of venous thromboembolism (VTE), stroke, and potential carcinogenic effects (Jordan et al. 2015, Sondheimer 2008).

Case 2: Prescribing the OCP

- a. Sarah, a seventeen-year-old woman, presents concerned that she has not had a period for the last eight months, coinciding with a significant weight gain of twenty-five kilogram. Her usual general practitioner (GP) had diagnosed her with PCOS and suggested a script for the COCP. She is not sexually active presently but has been in the past. Sarah wants a regular period and does see contraception as an added advantage should she require it.
- b. Talisha, a twenty-three-year-old beauty therapy student, presents for a repeat script for her Yaz (ethinylloestradiol/drospirenone). She is currently on Roaccutane (isotretinoin) as prescribed six months ago by her dermatologist for severe acne. After being prescribed Roaccutane, she elected to see a fertility awareness practitioner to monitor her cycle in order to avoid becoming pregnant. Two months later, she saw her GP colleague who recommended against FABMs for contraception and instead supplied her with the initial COCP prescription.
- c. Lesley, a forty-nine-year-old corporate lawyer, just wants a repeat script for her Levlen

ED (ethinyloestradiol/levonorgestrel) which she has been on for fifteen years without any concerns. She does not have a regular partner but is sexually active. A cursory review of her health file shows a blood pressure of 160/110 at last COCP script visit twelve months ago, she is a smoker and has a maternal history of breast cancer at age forty-five.

For the case of Sarah (case 2a) who has PCOS and is not currently sexually active, the COCP may be prescribed if this is considered the best treatment in the circumstances, although other treatment may also be available (Goodman et al. 2015).

If Sarah was sexually active, then the circumstances of the GP would be significantly different and his or her obligation would be to avoid cooperating in what is considered either morally or ethically evil. Considering the moral and ethical objections to the use of hormonal contraception, the level of cooperation of the GP in prescribing the COCP in such a case would need to be questioned as to whether his or her actions would be morally licit or not. Is such cooperation *formal*, in which the clinician willfully and intentionally shares in the wrongfulness of the agent's act and is always wrong, such as intending the outcome of contraception as a primary goal for Sarah? Or is it *material*, in which the intent or contribution is good or neutral in itself, though foreseeably used to some immoral end? If the GP intends primarily for Sarah's PCOS to be controlled, then there is material cooperation. The next distinction in this case is whether there is immediate or mediate material cooperation by the GP. *Immediate material cooperation* is when the object, in this case provision of hormonal contraception, is the act which is externalized by the intent to do the morally wrong act. This reduces the act to formal cooperation so is itself always morally wrong (with the exception being in the case of duress). *Mediate material cooperation* is characterized by not intending or undertaking the act but by providing peripheral assistance. In certain circumstances, mediate material cooperation may be regarded as being morally licit based on the principle of double effect. Mediate material cooperation may be distinguished as being *proximate* or *remote* depending on how involved or removed it is from the action (Keenan and Kopfensteiner 1995). In the original case, since Sarah's GP is aware that she is not sexually active, then prescribing the COCP is not immediate material cooperation in contraception. If, however, she was sexually active or was planning to use the prescription for contraceptive purposes, then this degree of the GP's material cooperation

would need to be reevaluated. For such mediate cooperation to be considered morally acceptable, the GP must be satisfied that by writing the directions for a hormonal contraceptive product for a sexually active woman, the GP is adequately remote from the contraceptive effect it will have in Sarah and that treatment of her PCOS is a sufficiently grave reason in proportion to the potential preimplantation abortifacient effect of the COCP and separation of the procreative and unitive aspects of sexual intercourse (Paul VI 1968, no. 12). One proposed guideline to assess the proportionality in such a situation would be to consider if not prescribing the COCP in order to achieve the intended noncontraceptive benefit would be considered malpractice by omission (Grisez 1997d). If, as likely in this case, it would not be considered malpractice, then the reason for prescribing the COCP may not be sufficiently grave to justify doing so. An alternative assessment for proportionality would be the provision or absence of medical care to restore health and prevent disease in the assessment of negligent practice. Sarah has presented with a clinical disease that requires a multidisciplinary approach to restoring her health, the provision of care (dietary and lifestyle changes, weight loss, and endometrial protection) within accepted clinical guidelines would be expected.

There are likely clinical absolute and relative contraindications to prescribing the COCP in most circumstances. Assuming the GP's colleagues do not hold the same morals and ethics about not prescribing the COCP as the GP, if these colleagues considered it acceptable clinical practice not to prescribe the COCP in the case where Sarah was sexually active based on medical contraindications, then the recommended course of action would similarly be for the GP to refuse prescribing the COCP to Sarah in such a case (Grisez 1997d).

For Talisha who is taking isotretinoin (case 2b), drug manufacturer recommendations and government regulations require that she be warned about teratogenesis if she becomes pregnant while using it and for a period of time afterward. The issue is ensuring that she has taken reasonable steps to prevent pregnancy. If she is properly instructed in fertility awareness, she could be as confident as using the COCP for that purpose (Pallone and Bergus 2009). That would be especially so if the couple avoided the preovulatory phases of the cycles, waiting instead for either the postovulation higher basal body temperature or the sudden change to dry or sticky cervical discharge after a pattern of wet or slippery discharge, indicating that ovulation had occurred. If she wanted to be even more certain, a urine or serum test for the

ovarian hormones indicating raised progesterone levels consistent with being postovulatory could be undertaken. Timing intercourse to align with fertile and infertile periods in a woman's cycle may be consistent with maintaining the integrity of the unitive and procreative qualities of such intercourse: there is no deliberate obstruction of the procreative process, while the act of intercourse during a nonfertile time (or abstinence otherwise) is not in itself unethical (Paul VI 1968, no. 16). If Talisha were to take the COCP "to be sure" of pregnancy avoidance, this would have a primary contraceptive intention so would directly be aimed at separating the unitive and procreative aspects of sexual relations (Paul VI 1968, no. 12).

The situation for the current GP regarding Talisha is complicated by the fact that a different GP in the practice had initially prescribed the COCP and that now Talisha is "only" requesting a repeat prescription. The issue for Talisha is that of continuity of what appears to have been GP-approved care. The current GP has a duty of care in this regard but may also exercise a conscientious objection to prescribing the COCP after considering the ethical implications of this scenario (Medical Board of Australia 2013). Provided that the current GP's conscientious objection has been disclosed to colleagues and Talisha, it may be acceptable for the GP to undertake the routine checks needed for a patient taking the COCP and update her record before communicating the request to a colleague who might then choose to write the prescription for the patient to collect later. The question of cooperation arises: whether the actions of the current GP constitute formal, immediate material, or mediate material cooperation in prescribing the COCP by this process. This does not necessarily relate to the proximity (or perceived remoteness) of the current GP to the final prescribing of the COCP for Talisha. If the intent or the goal of the current GP is for Talisha to see his colleague in order for the repeat prescription of the COCP to be written, then such action implicates the current GP formally in the resultant prescribing of the COCP. In contrast, the intention for a colleague to reassess and provide contraceptive options may itself be considered at least morally neutral. One role of the current GP is to ascertain clinical risk for medication being taken by Talisha, which is a morally good action. Subsequent acceptability of material cooperation by alerting a fellow GP of Talisha's request after informing her of one's personal conscientious objection may then be assessed by considering the strengths of the diverse reasons for and against sending Talisha to that

colleague. Comparing the proportionality of reasons is problematic since what first must be defined is to what they are proportionate, following which the current GP's personal judgment as to what the magnitude or impact each of these reasons has on the situation at hand, including interpersonal (doctor-patient and collegiate relationships) and vocational factors. One searching question might then be asked in such a situation: would it be reasonably preferable for the current GP to send Talisha to his colleague for the collated reasons rather than not? For material cooperation to be morally acceptable, the reasons for sending Talisha to a colleague must be proportionate to the reasons for not doing so rather than to the gravity of prescribing the COCP or how proximate the current GPs actions are to Talisha receiving a prescription for the COCP (Grisez 1997a).

In a not dissimilar scenario, Lesley (case 2c), who is seeking her routine repeat COCP prescription, may have her risks of adverse effects for the COCP assessed at the time of the consultation. These are not insignificant considering her blood pressure, smoking, and age which all increase the risk of stroke, heart attack, and VTE, as well as the risk of breast cancer related to her family history and effect of the COCP (Imkampe and Bates 2012). There are considerable medical reasons in this case for not prescribing the COCP, as distinct from moral or ethical reasons. Referring on for a second medical opinion in this case may be considered. Mitigating the GP's cooperation in referring for prescribing of the COCP would be making the GP's moral beliefs/conscientious objection known and giving witness to the values espoused in *Humanae vitae* by not personally prescribing the COCP.

Male Fertility Investigation

Infertility may result from female factors, male factors, and combined factors. Although much emphasis on infertility investigation and management is directed to the woman, male investigation is also necessary to ascertain the presence of specific male infertility and to direct further investigation for the woman.

Case 3: Male Fertility Investigation

The Johnsons present as a couple to your service, having tried to achieve a pregnancy for the last 3 years. They are both healthy and have no pre-existing medical or surgical conditions of note.

Jill is ovulating well, and she is comfortable with the consideration of a diagnostic laparoscopy.

Prior to undertaking invasive investigation of his wife, John should have a seminal fluid analysis performed. Three possible ways of collecting his semen include:

- using a specially manufactured polyurethane device similar to a condom called a “Male-FactorPak” (MFP), in which the semen is collected within a normal act of intercourse;
- a Huhner’s test in which the doctor performs a procedure much like a Pap smear to collect the semen from the cervix after sexual intercourse;
- production of a masturbatory sample: either undertaking this at the pathology laboratory or delivering after producing the sample elsewhere.

The MFP method allows patients to collect a semen specimen during intercourse, providing an alternative to masturbation and thus avoiding the moral issue and a potentially degrading experience. There is evidence that semen collected during a normal act of intercourse for analysis is more viable and representative than masturbatory samples (Zavos 1985, Zavos et al. 1994). The MFP device resembles a condom and is made of a flexible, inert organic polymer, polyurethane. Pathology laboratory staff may not have protocols for handling a condom device containing semen; however, semen may be decanted by the patient from the MFP into a conventional prewarmed specimen jar. Collection via contraceptive condoms (with or without spermicide) is unacceptable due to poor sperm survival, while non-spermicidal sheath collection devices have demonstrated superior sperm survival and more accurate seminal volume measurements than other collection devices (Schoenfeld et al. 1978, Pradise et al. 2016). The World Health Organization (2010) recommends such a preferred collection method.

In order not to separate the procreative quality from intercourse, the MFP must be perforated by a sterile needle to allow some semen to pass into the vagina. This could be said to reduce the chances, though not totally, of fertilization happening as a result of that particular act of intercourse because it involves removing sperm that might otherwise have achieved fertilization. The purposes, however, are to gather sperm for analysis in order to identify treatable causes and also to prevent invasive and potentially unnecessary diagnostic procedures/treatment

on the woman if the man is identified as infertile. The overall aim is to aid in procreation.

Use of the MFP does not exclude the possibility of the act of intercourse being fecund nor to intentionally separate the procreative and unitive qualities of the union. It could be argued that double-effect reasoning applies to both the perforated and nonperforated MFP, since the intent is to obtain a sample only, not to remove the semen from the act. That makes the act different from the use of a contraceptive condom which aims to prevent all mixing of bodily fluids and is specifically intended to prevent procreation (Paul VI 1968, no. 14).

Huhner’s test is not routine and is offered by only a few pathologists. The collection process involves cervical sampling of semen and cervical mucus shortly after intercourse which should be undertaken within the fertile window when cervical mucus is present. As well as sperm counts and motility, it can be used to assess interaction of sperm with the cervical mucus. Similar to the MFP, Huhner’s test does not intentionally separate the procreative and unitive qualities of intercourse. However, it is intrusive and may be uncomfortable for the woman, has only a poor to fair reproducibility of results, is prone to unrepresentative sampling, and overall does not present useful results (Hilgers 2004).

The masturbatory sperm sample has become the standard collection method to gather data on sperm counts, motility, and some gross abnormalities. The moral issue of masturbation for this purpose is disputed by moral theologians. It has been argued that masturbation for the purpose of sperm collection and analysis would be permissible since deliberate stimulation of the genital organs is not done in order to derive sexual pleasure. The prevailing counterargument, however, is that the object of the act is still sexual pleasure in order to achieve orgasm for the intended consequence that the ejaculate can be collected for analysis. It is often undertaken with pornographic material and imaging, opposing the promotion of chastity noted in *Humanae vitae* (Paul VI 1968, no. 22), is described as being both awkward and embarrassing for the male (FertilityAuthority.com 2018) and may actually deter a male from providing a seminal fluid sample for analysis.

Fertility Awareness and Assisting Conception

It is legitimate for a doctor to provide advice and treatment in order to restore reproductive health as part of infertility therapies. Optimal fertility health

and awareness requires knowledge of the physiological signs of fertility taught by the various agencies for FABM. Restoration of fertility may involve hormonal supplementation, surgical treatment of endometriosis, ovarian drilling, and mechanisms to enhance ovulation. Providing fertility awareness education does present certain goods such as fostering mutual respect and cooperation within couples and pointing toward the undeniable reality of sexual difference and complementarity. Fertility awareness allows individuals and couples to take responsibility for their fertility, bringing with it an awareness of their bodies, sensitive to symptoms of health and disease.

Should a woman wish to use her fertility awareness knowledge to conceive a child in a manner that is opposed to the clinician's intention in providing that knowledge, the nature of cooperation should be questioned: is it formal or material, immediate or mediate, proximal or remote? Broadly speaking, fertility awareness education may be provided by the clinician without entering into any potentially wrongful end for which it may be used. In the absence of formal cooperation, the level of cooperation would be material, mediate, and sufficiently remote to remove a clinician from sharing in the wrongfulness of any act of the agent which might follow (Grisez 1997e).

If a woman is known to be ovulating adequately, the intent of procedural fertility management (such as ovulation induction) is aimed toward conceiving a pregnancy rather than restoring fertility and may thus be deemed as formal cooperation with the woman. Hence, further consideration of her individual circumstances is warranted to ascertain the balance of risk versus benefit of treatment as well as natural law principles regarding the morality of intercourse within a couple's relationship (Paul VI 1968, no. 11).

Case 4: Ovulation Induction in a Same-Sex Relationship

Elvira, a 34-year-old social worker, informs you that she and Toni, her same-sex partner, have decided to have a child by donor insemination. She asks you to assist her with ovulation induction to improve her chance of conception.

Humanae vitae details the regulation of birth in the context of sacramental marriage. Current definitions of marriage have diversified with a nonsignificant

emphasis on elements of a permanent relationship being demonstrated between two or more people, such as cohabiting or conceiving children. In addition to "church marriages," "legal marriages" now include same-sex unions, de facto relationships, and polygamous unions. It is often not possible for a clinician to determine whether a couple is sacramentally married or whether there are elements within their marriage that may nullify the validity of it, for example, existence of a prenuptial agreement or history of civil divorce. Other arguments for providing restorative reproductive treatment for couples not sacramentally married include the couple demonstrating an openness to procreation and the supreme gift of a child, consideration of that child's rearing and education, and conditioned social perspectives negating the need for marriage such as the individual's own family environment growing up, perceptions around the need for sexual and cohabiting experience prior to getting married, and the avoidance of an extravagant/expensive wedding ceremony. Consideration should be given to the diminished degree of culpability for the objective state of nonsacramental marriage (*peccatum*) as being contrary to the moral law (Paul VI 1968, no. 9) in this context.

A child of a same-sex relationship will always have come from outside the relationship and be a stepchild of one or other of the partners. Clinicians need to consider whether their aid will lead to the existence of a child who will potentially be deprived of a relationship with his or her biological father or mother as he or she grows up and to what extent the child's rights to know, to have access to, and be nurtured by his or her parents will be denied.

A legal issue would arise in managing Elvira who is requesting ovulation induction to assist conception while she is in a same-sex relationship. In many jurisdictions in Australia, there is legislation that prohibits discrimination based on age, disability, political belief or activity, race, religious belief or activity, sex, and sexual orientation, for example, the Victorian Equal Opportunity Act 2010 and the Charter of Human Rights and Responsibilities Act 2006 in Victoria, Australia. Other specific legislation may govern artificial reproductive treatment procedures, including artificial insemination, such as the Victorian Assisted Reproductive Technology Act 2008 which requires that "persons seeking to undergo treatment procedures must not be discriminated against on the basis of their sexual orientation, marital status, race, or religion." Withholding such treatment from Elvira based on her sexual orientation may thus be unlawful. Significant ramifications of unlawful activity may include legal proceeding and

loss of professional registration and, hence, livelihood, which may influence assessment of the moral validity of any mediate material cooperation in providing ovulation induction. In some jurisdictions, there is recourse to freedom-of-conscience principles, such as the Medical Board of Australia (2013) Code of Conduct, which permits clinicians to not provide or directly participate in treatments to which the clinician conscientiously objects. Such conscientious refusal should not obstruct patient access to treatments that are legal. Clinicians must also be aware that in certain other circumstances, they are required to cooperate against their conscientious beliefs due to legal requirements, such as by the Victorian Abortion Law Reform Act 2008 and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists Code of Good Ethical Practice (2015).

In dealing with the complexities of providing fertility treatment for same-sex couples, similar principles apply as in other circumstances described herein: that formal and immediate material cooperation are morally unacceptable and that material cooperation may be licit if the clinician is sufficiently remote from and that there are proportional reasons for permitting and facilitating the immoral outcome. Legal requirements around conscientious objection and on-referring may need to be considered. In addition, consideration of clinical factors may influence treatment decisions, for example, ovulation induction may not be required if a woman is ovulating and may be contraindicated medically, with the possibility of superovulation and high-order multiple pregnancy ensuing.

ART: In Vitro Fertilization (IVF) and Gamete Intrafallopian Transfer (GIFT)

According to *Dignitas personae*, technical interventions into the procreative process should respect three essential goods: (1) the right to life and physical integrity of the embryo from the moment of conception, (2) the right to become a father or mother only through one's spouse in marriage, and (3) that procreation should be "the fruit of the conjugal act specific to the love between spouses" (Congregation for the Doctrine of the Faith 2008, no. 12). It follows that any intervention that facilitates the conjugal act in reaching its end is permitted, but any action that substitutes the conjugal act is to be excluded (Congregation for the Doctrine of the Faith 1987, II.B.7; 2008, no. 12).

Case 5: ART

19-year-old Melanie and 20-year-old Chris present for lessons in natural family planning to avoid pregnancy. They are sexually active and unmarried. Six years later Melanie and Chris marry and are keen to start a family, hoping to have many children. After three years of trying to conceive they present for assistance in conceiving. Melanie wants to investigate any potential underlying problems, but Chris reports he is getting impatient and wants to undertake IVF because he feels it will help them have children faster.

In reproductive technologies that replace the conjugal act, such as IVF as requested by Chris, the child originates from the act of the technologist, in which the relationship between technologist and child is one of producer and product: an unequal relationship of dominance in which the embryo is subject to objectification and quality control. In contrast, ordinary sexual reproduction involves an act of intercourse in which the child comes into being usually as an extension of the parents' love and thus as an equal third party to their love. While ARTs intentionally stand over the newly conceived life, the child that results from the conjugal act is not directly intended but comes to be *on the occasion* of the act (Rhonheimer 2010). He or she is rightly received as a gift, not as an artifact of making subject to conditional acceptance.

Furthermore, another gravely immoral aspect of IVF relates to the production of embryos that are in excess of that required for transfer back into the woman's uterus. There are parallels with postfertilization "contraception" (procured preimplantation abortion) due to the reduced moral status given to the "preimplantation" embryo (Kischer 1997). Despite clear evidence and concordance of opinion that the life of a distinct human being begins with formation of the zygote (Hall 1983), the diminished moral status of these early human beings is demonstrated by the common practices of keeping them in stasis (frozen for storage), discarding as biological waste, or being used for scientific experimentation at an arbitrary postfertilization age. Such ethical problems are not peripheral to the process of IVF but are inherent to processes that paradoxically claim to be at the service of life: processes that do not respect the inviolable dignity of the human embryo and are perfused by a eugenic mentality (John Paul II 1995, no. 14). Individual IVF providers and technicians, while

undoubtedly well intentioned, cannot make themselves immune from formal cooperation in these evils.

The use of GIFT is sometimes proposed as an ethically valid alternative to IVF, although it is the subject of some contention (Doerfler 2000). GIFT involves the transfer of gametes into the fallopian tube and thus before fertilization had commenced. It has been proposed that a single ovum transfer past a blockage in the female reproductive system followed by sexual intercourse may be in itself a legitimate means of assisting a couple to conceive a child within the dignity of the conjugal act (Tonti-Filippini 1990). Transfer of sperm past a blockage in the epididymis in order for the following act of intercourse to have a higher chance of conception may be similarly acceptable. This recognizes that the technical assistance provided above helps the unitive act of sexual intercourse to achieve its procreative goal and is not a substitute for the act itself.

On this principle, there is debate about the causal relationship between the act of intercourse and conceiving a pregnancy and that of the technician's actions and conceiving a pregnancy. If GIFT is undertaken using a perforated condom in order not to render the act of intercourse infertile, it is the semen remaining in the condom that is used for GIFT. In other words, sperm incidental to the fertile element of intercourse is used in generation of a new life, which parallels that aspect of IVF (Grisez 1997c). This separation of the unitive act from the procreative end, and thus causal relationship of intercourse, is further evidenced by the direct relationship of the generative act undertaken by the GIFT technician in bringing the sperm and ovum together. This process would seem to displace the act of intercourse as the direct cause of the origin of the new life being created. The Church has currently not pronounced on GIFT, leaving it to the couple as to whether the process being undertaken is a displacement or instead a legitimate assistance to the unitive act of intercourse.

Prenatal Adoption of IVF Embryos

The fate of "spare" or abandoned embryos created through IVF¹ constitutes another moral dilemma. The Catholic Church has rejected using these embryos for research or for the treatment of disease because that would involve treating the embryos as mere "biological material" and result in their destruction. It also asserts that proposals to thaw such embryos without reactivating them and then using them for research, as if they were normal

cadavers, would be unacceptable (Congregation for the Doctrine of the Faith 2008, no. 19).

Case 6: "Spare" IVF Embryo Adoption

Veronica is a 45-year-old mother of two IVF children who recently became a Catholic convert. She has been recently widowed and is in poor health herself with ischemic heart disease. Veronica has 11 embryos remaining in an IVF program and has a friend who is infertile and single who would like to have some of the embryos transferred to her uterus.

Another option involves making these embryos available for infertile couples. The case of Veronica, who wishes to donate her spare embryos to an infertile friend as a form of prenatal or "embryo adoption" (case 6), is praiseworthy with regard to the intention of respecting and defending human life (Lee 1990) by saving the embryos from intentional demise and for presenting a treatment option for an infertile woman. The Catholic Church has not taken an authoritative stance on prenatal adoption. Nevertheless, it holds that there are various problems not dissimilar to those described for artificial heterologous procreation and surrogate motherhood (Congregation for the Doctrine of the Faith 2008, no. 19). Among the other reasons mentioned in the preceding section, IVF itself is considered ethically unacceptable because it breaches the unity of marriage, which means reciprocal respect for the right within marriage to become a father or mother only together with the other spouse (Congregation for the Doctrine of the Faith 2008, no. 16). The Church further recognizes that the countless numbers of abandoned embryos represent a situation of injustice that cannot be resolved.

While utilizing "spare" embryos to treat infertility is deemed unacceptable, a different proposal involves married couples who already have a family, making a home for these abandoned children through "prenatal adoption" or "heterologous embryo transfer" (HET). This option has divided pro-life ethicists. Some have argued that this matter is quite different from surrogacy because the issues arise after the embryos have been produced. They acknowledge that although it was wrong to have produced an embryo by IVF and to have subjected them to a state of suspended animation, the end or intended outcome of prenatal adoption is good because it rescues the embryos from that state. Given

also that the chosen means (thawing, rehydrating, and transferring an embryo from freezer to uterus) is good, this process may be considered morally acceptable. Other arguments are that procreation is not involved because the child already exists and transfer to a uterus is akin to a woman volunteering to nurse a foundling at her breast and that the embryo is in a similar situation to a foundling awaiting adoption. Since prenatal adoption is primarily concerned with the welfare of the baby, it is deemed not to contradict the Church's teaching on surrogacy, which requires that a child must be conceived, born, and nurtured by his or her natural parents (Grisez 1997b).

Opponents of HET argue that embryo transfer is intrinsically different from adoption. The transfer of the embryo into the woman's uterus makes her pregnant, and being pregnant means becoming a mother. Pregnancy is, in itself, a union between mother and child. The child is essentially *of her*, not only located within her but bound essentially, vitally, to her. She is literally home to the child in the sense of a dynamic dependency and interrelationship in which they share an intimate biological and spiritual connectedness. The problem is that she becomes a mother separately from the conjugal act and independently of her husband, and this is deemed to be inconsistent with respect for her dignity, with the sacredness of marriage, and the exclusive commitment given in marriage to her union with her husband (Paul VI 1968, nos. 8, 9). Some go so far as to suggest that the woman's consent to become pregnant in this way is an unchaste act and violates that couple's reproductive integrity. What is meant to be a result of a marital act—pregnancy—is now the result of a merely technical procedure, while the sanctity of marriage means that the woman laying herself open to an impregnating intromission is a vital part of the self-giving involved in her part of the marriage act (Geach 1997). Her body, which has been united to her husband in marriage, and forms one flesh with him, “for a time, becomes the home of a child that bears no relationship to him, that is from outside their union. It is in this sense that heterologous embryo transfer may be an infidelity to the marriage” (Tonti-Filippini 2003, no. 120). There is also concern for the alienation of the woman's husband through prenatal adoption (Corby 2013). He takes no part in her becoming pregnant. She becomes a mother outside of her marriage and in that way thus breaches the commitment of the exclusive gift of herself to her husband (Paul VI 1968, no. 9).

Concluding Remarks

Paul VI's encyclical has been called “prophetic” in light of its prediction of a dismantling of human sexuality and rupture of relationships—a lowering of sexual standards, an increase in infidelity, an objectification of women as mere instruments for the satisfaction of the desires of men—that is wrought by an intentional disruption of the unitive and procreative aspects of conjugal love (Paul VI 1968, no. 17; Smith 1993). However, as demonstrated by this discussion of the ethics of reproduction, *Humanae vitae* may be considered equally prophetic and timeless in its application to many contemporary bioethical issues, unknown in 1968, that today demand an adequate response. In setting forth the intrinsic complementarity and irreducibility of the unitive and procreative dimensions of the conjugal act, the encyclical provides a hermeneutic through which such cases can be properly and faithfully assessed. Thus, being so much more than a reiteration of the Church's determination of the illicitness of contraception, *Humanae vitae*, in its vision of human sexuality, offers us a sound foundation on which to construct a reasoned and faithful response to the ethical challenges of our day.

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This article is dedicated to the memory of professor Nicholas Tonti-Filippini (Fisher 2015) whose vision brought together the three leading fertility awareness providers in Australia: Billings Life, FertilityCare Australasia, and the Australian Council of Natural Family Planning, at the inaugural National Fertility Conference in Melbourne, 2014. Nicholas coordinated the first bioethics session and wrote many of the ethical analyses. The concepts and analyses presented herein do not necessarily represent the views held by those acknowledged in contributing to the development of this article.

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Note

1. Women participating in in vitro fertilization (IVF) must undergo a surgical procedure. To minimize the associated risks with multiple procedures, women's ovaries are overstimulated to increase production from one to two ova to ten to thirty ova per cycle which are then available for harvest. Ova are very fragile, and storage is problematic. Embryos are much more robust, so the practice is to fertilize all the available ova that are harvested. The reserve of embryos thus created enables several attempts to achieve pregnancy to then be made from the one surgical procedure to harvest the ova. Furthermore, the issue with success rate of the embryo transfer procedure is also given as a reason for creating a reserve supply (Lee et al. 2016). Often, couples on IVF programs still have "spare" embryos in storage when they "complete" their families or decide for other reasons not to continue. As a result, there are in the order of millions of human embryos worldwide which are left in storage, used for research, or otherwise discarded (Embryo Adoption Awareness Center 2018; Fuscaldo and Savulescu 2005).

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