

The Ethics of Ectopic Pregnancy

A Critical Reconsideration of Salpingostomy and Methotrexate¹

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Abstract

Ethicists have continued to debate about two means of treating ectopic pregnancy, namely, the removal of the embryo from the tube (salpingostomy) and the use of methotrexate. This article examines the major arguments in favor of considering salpingostomy intentional killing. The article goes on to evaluate the major arguments in favor of the conclusion that methotrexate is intentional killing or intentional mutilation. The tentative conclusion reached is that both salpingostomy and the use of methotrexate should be considered morally permissible.

Extrauterine or ectopic pregnancies occur outside the uterus; the vast majority of these are found in the fallopian tube. As the pregnancy continues, the fallopian tube may burst and lead to hemorrhaging which can cause maternal death. It is estimated that in the United States alone ectopic pregnancy is the number one cause of maternal fatality in the first trimester of pregnancy and results in the death of some forty to fifty women each year.²

In some cases of ectopic pregnancy, the embryo has already died but the trophoblast, the forerunner to the placenta, continues to bore into the fallopian tube. In cases in which the embryo has died but the placenta continues to be built—so-called “persistent ectopic pregnancy”—any medically indicated treatment is permissible, since abortion is no longer possible. If we define the term as Pope John Paul II reaffirmed, direct abortion (abortion

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willed as an end or as a means) is always wrong because it is the deliberate (i.e., intentional) killing of an innocent human being.³ Of course, once the human embryo or fetus has died, abortion is no longer possible; and any safe means of removing the embryonic remains and other products of conception from the formerly expectant mother is morally acceptable.

How should cases in which the human embryo is still alive be treated? How should health-care providers—and health-care institutions and hospitals—committed to the basic equal dignity of all human beings respond to this medical emergency?

In current medical practice, the following treatments are used to treat tubal pregnancy:

- 1) expectant management,
- 2) removal of the tube with the embryo inside it (salpingectomy),
- 3) removal of the embryo alone leaving the tube intact (salpingostomy),
- 4) administration of methotrexate.

In this paper, I will discuss these procedures in order to determine which of these treatments may licitly be practiced by those affirming that every single human being should be protected by law and welcomed in life.

I. Expectant Management

In expectant management, nature is allowed to take its course in hope that the situation will resolve itself. In about 40 to 64 percent of the cases, a tubal pregnancy spontaneously aborts, and the threat to the mother's life is removed without having to resort to surgery or chemical intervention.⁴ With expectant management, the pregnant woman is carefully monitored in terms of serial hormone levels and by means of ultrasound. If the human embryo grows and the hormone levels continue to rise, then some intervention is medically indicated. Expectant management is a morally permissible way to treat tubal pregnancy when it is medically indicated. Where expectant management is no longer medically indicated, other treatment options should be used.

II. Removal of the Tube with the Embryo Inside It (Salpingectomy)

This proposal is widely accepted as an application of the principle of double effect. This double-effect reasoning can be presented as follows:

- 1) Considered by itself and independently of its effects, the action of removing the damaged fallopian tube is not evil. As in the

case of removing a cancerous uterus, the fallopian tube has become pathological and a threat to the health of the woman. It is a good action to alleviate a pathology, even if it means excising once-healthy organs.

- 2) The evil of the embryo's death is not a means to the good but rather a side effect of the morally legitimate goal of stopping or preventing maternal bleeding.
- 3) The evil of embryonic death is not intended as an end. The removal of the tube is not a pretext sought for bringing about the death of the embryo.
- 4) Finally, there is a proportionate reason for allowing the evil effect, because without the surgical intervention the mother may die, and the embryo will die even without the intervention.

These two procedures—expectant management and removal of the tube (or section of the tube) with the embryo inside it—have found nearly universal acceptance by those committed to the basic equality of all human beings from conception to natural death. Unfortunately, removal of the tube diminishes the potential fertility of the woman, and in cases where problems already exist with the other tube, may render her sterile.

III. Removal of the Embryo Leaving the Tube Intact (Salpingostomy)

The medical advantage of removing the embryo from the tube is that the fallopian tube remains intact, facilitating future pregnancies. Since the life of the embryo is almost certain to be lost, many ethicists reason that it makes sense to preserve what can still be preserved—namely, the woman's capacity for fertility. This can be done by salpingostomy.

Ethicists are divided about whether this procedure constitutes direct abortion.⁵ I can think of three hypothetical arguments that support the view that removal of the embryo alone is intrinsically evil, yet I believe each of those three arguments fails to withstand critical scrutiny.

A first objection to salpingostomies is that removing the embryo alone, rather than the pathological tube with the embryo within it, is direct abortion because it is *certainly fatal* for the embryo. These procedures bring about death with certainty, so they must be intentional or direct killing. However, most ethicists also agree that if a woman discovers that she has uterine cancer that she may have the uterus removed even if she is pregnant with a baby that is not yet viable.⁶ In other words, she may have the cancerous uterus removed even if it is certain that the pre-viable unborn child will die. This removal is not intentionally killing the unborn despite the certain side effect

of fetal death. So the fact that some medical procedure brings about fetal death *with certainty* does not mean that it is intentional or direct abortion. Similarly, the removal of the pathological tube along with the human embryo (salpingectomy) also causes certain embryonic death, so the certainty of death by no means indicates that the procedure is intentional abortion.

Secondly, it is sometimes argued that removal of the human embryo from the tube *simply is* the very same thing as killing the embryo, just as cutting off someone's head simply is killing the person. But what if the human embryo could be successfully removed and implanted in the uterus? Some claim that this has already taken place. Writing in the *American Journal of Obstetrics and Gynecology*, L. Shuttles reports:

In Gifford Memorial Hospital, Randolph, Vermont, in 1980, a 27-year-old patient with unaccountable infertility and regular 28-day cycles had intercourse around the middle of the month. Approximately four weeks later severe pain developed in the region of the left fallopian tube.... Exploration while the patient was under regional anesthesia revealed a single corpus luteum in the left ovary, some uterine congestion, and on the direct palpation on the left tube a small 4 to 5 mm mass. With careful incision into the tubal lumen an intact embryonic sac was enucleated, still completely covered with chorionic villi.... It was immediately placed in an oxygenated saline solution warmed to body temperature. A segment of infusion tubing was cut, one end slanting and the other attachable to a glass Preto syringe with a large rubber bulb enabling one to aspirate or express as desired. With gentle suction the slanted end of the tubing was passed into the myometrium in the upper, anterior aspect of the uterus until discernible decidual tissue was observed. With the tubing in situ, the embryonic sac was taken up into the glass syringe, which was then attached to the tubing and expressed *in utero*. Tamponade of the puncture side with a very wam [sic] pad controlled any bleeding. The tube was then repaired and the abdomen closed. The pregnancy test remained positive. After normal postoperative and prenatal course, a normal infant was delivered at term.⁷

If this report and a much older one like it are accurate,⁸ it would not be true to say that salpingostomy necessarily involves the death of the embryo. In other words, removing the embryo from the fallopian tube in itself *is not* simply the same thing as intentionally killing. Although there is not yet an established procedure for this transfer, one can hope that advances in microsurgery and early detection of tubal pregnancy would make possible both a preservation of the embryonic human being and the reproductive capability of the fallopian tube.

I believe that the removal of the embryo from its pathological site of implantation by surgical removal of the embryo alone (salpingostomy) is

implicitly recognized as a morally good or indifferent action, considered by itself and independently of its effects (condition 1 of the principle of double effect), even by those who condemn these procedures. A number of respected ethicists vigorously oppose removing the embryo alone, including William E. May, Eugene F. Diamond, and Kelly Bowring, but they nevertheless endorse efforts at embryo transplantation from the fallopian tube to the uterus.⁹ But such transplantation necessarily involves detaching the embryo from its location in the fallopian tube—which if it were truly evil in itself and not merely from its effects—would be an act that is intrinsically evil and therefore never to be performed regardless of the consequences. So at least implicitly, these authors do not hold that detaching the embryo from its pathological location in itself is intrinsically evil (or they should—to be consistent—condemn as intrinsically evil any effort to transplant a tubal pregnancy into the uterus).

It might be responded that it is immoral to remove the embryo from its pathological implantation site *if one has no safe haven for the embryo*, such as the uterus. To use a different example, it would not be wrong to take someone off a life raft in order to put that person in a larger safer boat, but it would be wrong to knock someone off a life raft if there were no place to put him, even if the person is certain to die on the life raft. Since there is no feasible transplantation technique for ectopic pregnancy, the removal of the embryo is morally wrong. If there were such a technique, it would not be wrong to remove the embryo leaving the tube intact.

However, if there is some further condition that can be added that renders an act accurately and morally described as no longer evil, then we are no longer talking about an intrinsically evil act. Again, if something is intrinsically evil—as opposed to circumstantially evil—then no further circumstance can render that act good, including the further circumstance that they can be removed to another place of safety. In other words, the response itself implicitly indicates that removing a human embryo from its point of pathological location is not intrinsically evil, just as removing someone from a lifeboat is not intrinsically evil. Both may be circumstantially evil; but then one must take into account the additional circumstances; and so the act in itself is not intrinsically evil.

In addition, some argue that removal of the embryo without the tube is illicit because it involves physically doing something to the body of the embryo that is not of benefit to the embryo, unlike removal of the tube along with the embryo in which the maternal fallopian tube is the object of the intervention. In the words of William E. May,

[in] the hysterectomy (and, similarly, the salpingectomy in handling a tubal pregnancy), the medical intervention is performed on the *mother*,

whereas in the “removals” of the unborn child by . . . salpingostomy . . . the interventions are performed on the *unborn child*.¹⁰

However, the removal of the embryo from the fallopian tube does not constitute an “attack” on the body of the human embryo, for it can be performed—although it is usually not—in such a way that the embryo’s physical integrity is not undermined. Removal of the embryo from the pathological location of implantation could be done such that the tubal maternal tissue that has been damaged is removed—leaving the embryo’s bodily integrity intact.¹¹ Indeed, if transplantation is facilitated, the removal would constitute a therapeutic intervention for both the mother as well as the human embryo.

Even if the surgery were performed on the body of the human embryo with damage being done to the human embryo’s body, that would not of itself mean that the surgery was a direct or intentional abortion/killing. In reasoning about self-defense, St. Thomas Aquinas famously argued that the act of self-defense is morally permissible even though performed against the body of the attacker and even though death results from the defensive force used.¹² Obviously, the human embryo is not an “attacker” in the formal sense, but Thomas’s point remains that the use of lethal force against another’s body does not of itself necessarily constitute intentional killing.

My point here is *not* to argue that the human embryo can be killed because the killing is justified as an act of self-defense. My point is that acting directly on someone’s body, does not, in itself, mean that all the effects which follow from acting directly on someone’s body are intended. In a just war, a strategic bomber may drop a bomb which *both* destroys a legitimate military target as well as kills by impinging upon the bodies of innocent civilians, but such a bombing may be justified for a proportionate reason.¹³ Conversely there are some *intentional* killings in which no action is taken upon the body of the victim. For example, if a lifeguard intentionally omits saving a drowning swimmer (so as to enact revenge perhaps), the lifeguard intentionally kills the swimmer. He has deliberately omitted an action, that he could have and should have performed, so as to secure the death of an innocent person. Similarly, parents who intentionally omit feeding a baby in order to kill the infant intentionally kill but do not act upon the body of the baby. In such cases, there is “direct” killing, i.e., an intentional killing, although the body of the victim is in no way physically impinged upon. Acting directly against the body of another is therefore not decisive in terms of defining intentional killing, and therefore not decisive in defining abortion.

Finally, one could appeal to authority in arguing that removal of the embryo alone from the fallopian tube is intentional abortion. Directive 45 of the *Ethical and Religious Directives for Catholic Health Care Services*

adopted by the U.S. bishops states: “every procedure whose sole immediate effect is the termination of pregnancy before viability is an abortion.”¹⁴ Directive 36 states: “It is not permissible, however, to initiate or to recommend treatments that have as their purpose or direct effect the *removal*, destruction, or interference with the implantation of a fertilized ovum” (emphasis added).

I argue that these directives do not settle the case, since, unlike earlier editions of health care directives issued in 1954 and 1971, the current directives do not indicate which procedures constitute a “sole immediate effect of terminating a pregnancy.” Does removal of the embryo from its pathological site of implantation fall under the norm prohibiting termination of pregnancy prior to viability? As Pope John Paul II indicated in *Evangelium vitae*, the intrinsic wrongfulness of abortion consists in its being the *intentional killing* of an innocent human being as a means or as an end. Indeed, “termination of pregnancy” in the morally prohibited sense should be understood in this light—for some licit actions “terminate a pregnancy” in a morally unproblematic sense, including removing a gravid cancerous uterus and removal of the tube alone with the fetus, but these actions are not direct or intentional abortions. Direct abortion, “termination of pregnancy” in the morally illicit sense, is properly understood as intentionally taking of human life—as a means or an end—prior to birth.

Perhaps soon a technique will be found that facilitates transfer of an ectopic pregnancy from the fallopian tube into the uterus. Imagine that the procedure is safe both for women and their developing children. If directives 45 or 36 were to be interpreted as condemning *all removals* in *all situations*, then these ectopic transplants would have to be forbidden in all Catholic hospitals. The embryo, who could be easily saved, would have to be allowed to die, for the life-saving transplantation would involve removing the embryo from its initial site of implantation. Since directives 45 and 36 were given to serve human life, not undermine it, interpreting either directive in the strict sense to exclude *all* embryo transplantation in *all* circumstances is not in accord with the values/goods that the directives are intended to serve.

Indeed, one could argue that the action, considered by itself and independently of its effects, is a benefit for the embryo itself. The human embryo cannot properly develop in the fallopian tube, so removing the embryo from its current lethal location is of benefit to the embryo, even if the later stages of what could be a rescue attempt are virtually doomed to fail in producing a live birth. In removing the embryo from the fallopian tube, a pathological condition is alleviated for the mother *and the embryo*, despite the bad side effect of virtually certain embryonic death.

By contrast, since uterine pregnancy in itself is not a pathology, to remove the embryo (or fetus) *from the uterus* prior to viability does not alleviate a pathological condition. Unlike tubal pregnancy, a uterine pregnancy considered in itself is simply not pathological for the mother or the developing human being *in utero*. Directives 45 and 36 are best understood to address the case of uterine pregnancy, in which detachment from the uterus prior to viability is lethal to the child. The directive should not be understood to cover the case of tubal pregnancies in which the embryo is removed from its pathological location.

IV. Administration of Methotrexate

Methotrexate (MXT) is drug that inhibits cellular reproduction in rapidly growing tissue; it is also used to treat some forms of cancer. It works by inhibiting the growth of the trophoblast, the forerunner to the placenta and the embryo proper. MXT is currently considered by most physicians (including faithful Catholics, perhaps mistaken, but acting in good faith) as medically indicated to treat early tubal pregnancy due in part to its 82–95 percent success rate.¹⁵ Like removal of the embryo alone, MXT has the medical advantage of preserving the tube, thereby enhancing future fertility. In addition, its use is much less expensive,¹⁶ not surgically invasive, and generally leads to faster recovery than surgery.

In actual practice, the use of MXT as medically indicated is, in the vast majority of cases, morally licit. MXT is not medically indicated for use if the fetal heartbeat is detected.¹⁷ However, the vast majority of tubal pregnancies are diagnosed some six to eight weeks into pregnancy, after the fetal heartbeat can be detected.¹⁸ So, if at six to eight weeks no fetal heartbeat is detected and hormone levels indicate a failed pregnancy, the human embryo is no longer alive. MXT may be administered to arrest the so-called persistent ectopic pregnancy, the continued growth of the trophoblast. In the rare case of a tubal pregnancy diagnosed prior the point at which fetal heartbeat is detectable (3.5 to 4 weeks post-conception), is MXT acceptable?

Over the past decade, ethicists who accept that no innocent human being, including human embryos from the beginning of their lives, should ever be intentionally killed have debated the permissibility of the use of methotrexate to treat tubal pregnancy, taking positions both for and against.¹⁹ Arguments that the use of methotrexate to treat tubal pregnancy is intentional killing often mirror the arguments against removal of the embryo alone. From this perspective, the use of MXT in cases of tubal pregnancy is intentional killing because it leads to the death of the embryo “invariably” or with certainty, and also seeks to affect the body of the embryo.

However, as noted in the previous section, neither the *certainty* of the effect nor *acting upon* the body of another entails that a lethal effect which follows from the action must be intended.²⁰ Seventeenth-century Jesuit Theophile Raynaud (1582–1663) asks us to imagine that we are fleeing on horseback from an unjust aggressor, and we find ourselves before a child playing on a narrow bridge. “Even though the child is not an unjust aggressor in this case, serious authors allow the horseman to continue his flight even if it means the death of the child.”²¹ In his flight, the horseman acts directly upon the child and does not act upon the child for the child’s own good, but the child’s death and/or mutilation is still not intentional. Certainty and acting upon the body of another are not necessarily determinative of the intention which defines the object of the human act. Even with certainty and acting upon the body of another not for that person’s benefit, the lethal consequence may still be a side effect of the action, and therefore of killing that is not intentional but merely foreseen.

Albert Moraczewski, O.P., argues that the use of MXT does not constitute the intentional killing of the embryo but rather should be seen as a healing act stopping further damage to the fallopian tube which also has the death of the embryo as a foreseen and regretted consequence. He writes: “The moral object is to stop the destructive trophoblast by stopping further protein synthesis; this is not achieved by killing the trophoblast or the embryo proper. Rather, death follows subsequently.”²² I tentatively agree with Moraczewski and many others that use of MXT in treating tubal pregnancy is not intentional killing.²³

One objection to this view is that the resolution of the ectopic pregnancy may very well take place by means of securing the death of the human embryo.²⁴ Moraczewski originally cautioned in 1996 that the effects of methotrexate needed to be verified prior to accepting its use because it would be unclear whether resolution of the ectopic pregnancy resulted from death of the conceptus or death of the trophoblasts. The necessary data has not yet been provided. Moreover, the toxicology and teratology literature (as well as the package insert that accompanies the drug and appears in the Physicians Desk Reference) are replete with warnings that the drug is abortifacient and causes birth defects. It may well be the case that methotrexate brings about the death of the embryo long before resolution of the trophoblastic hormonal activity. Thus, methotrexate secures a good end (saving the mother) via an evil means (killing the embryoblast, not the trophoblast).

This argument assumes that the chronological order of the effects determines whether that effect is intended, but this assumption is problematic. In self-defense, the death of the attacker may come chronologically prior to the cessation of the attack, but that does not mean that the self-defense is

necessarily intentional killing. In a just war, a bomb dropped on a legitimate military target may have an explosion that first kills innocent civilians sleeping on a factory roof and then destroys the military target. But, the bomber is not intentionally killing innocent civilians as a means to destroying the military target.

That a bad effect issues from an act more immediately and directly than a good effect, or precedes and causes a good effect, does not by itself make the bad effect a means to the good. A heroic soldier who throws himself on a grenade chooses to use his body as a shield so that the shrapnel will not kill his fellows. Yet he does not choose his own destruction as a means, even though the effect of throwing himself on the grenade—his body's being destroyed as it absorbs or slows down the shrapnel—is more immediate and direct than, and indeed causes, the good effect of the grenade's doing little or no injury to his fellows.²⁵

Even if MXT causes the death of the embryo prior to causing the end of trophoblastic activity, it does not follow that one necessarily chooses MXT as a means to causing the death of the embryo. It is true that one could choose MXT simply as a means to abortion. Similarly, one could choose removal of a gravid uterus simply as a means to abortion, and yet removal of a gravid uterus is not necessarily chosen as a means to abortion, as in the case of the gravid cancerous uterus when the removal is chosen as a means to securing the woman's health with the death of the unborn accepted as a side effect. Likewise, choosing to treat ectopic pregnancy by means of MXT is not necessarily choosing abortion.

Using MXT to stop the ongoing damage to the fallopian tube by the trophoblast is an action, considered by itself and independently of its effects, that is not morally evil. This is evident from the acceptance, even by those who otherwise condemn the use of MXT, of using methotrexate to treat so-called persistent ectopic pregnancy. In such cases, one may use MXT so as to stop the destructive action of the trophoblast upon the fallopian tube. As such, the use of MXT to stop the destructive activity of the trophoblast is ethically acceptable considered in itself independently of its further effects.

Even if the use of MXT need not constitute *intentional killing*, some authors hold that it still violates the first condition of double-effect reasoning because it is a form of *intentional mutilation*. William E. May writes that the trophoblast

is a vital organ of the unborn baby during gestation. Although it is discarded later on, it must be regarded as an integral part of the body of the unborn child.... One chooses to use MXT precisely because one knows that it will destroy the trophoblast, i.e., a vital organ of the unborn child. Its "therapeutic" effect is achieved only by means of its lethal effect on the unborn child. Moreover, the "therapeutic effect" does not benefit the

unborn child but the mother and does so only because of its nontherapeutic effect destroys the trophoblast of the unborn child, thus causing its death.²⁶

May argues that MXT in treating living tubal pregnancy may not be wrong as a case of intentional *killing* but rather as a case of intentional *mutilation*. “Even if the death is not precisely the means chosen, one cannot exclude from the means chosen the intentional violation of the bodily integrity of the unborn child and the causing of its death, and doing so, not for its benefit, but for the benefit of another.”²⁷ If one understands the trophoblast as a vital organ of the embryo, then it would seem that the use of MXT violates the first condition of double effect reasoning because intentional mutilation of an organ is intrinsically evil.

Thus, the debate about the moral permissibility of MXT to treat tubal pregnancy hinges in part on whether its use is the “intentional mutilation of an organ,” with the exact definition of each of these three major terms “intentional,” “mutilation,” and “organ” being matters of dispute.²⁸ By “mutilation” I mean the *intentional* destruction or removal of an organ (or other *vital* body part) that inhibits the function that the organ has *or will likely have* in maintaining the health of the one possessing the organ. The removal or destruction must be *intentional*, rather than a foreseen side effect of the action, since the foreseen side effects of action do not define an action as a certain kind of action. Further, removing body parts *simpliciter*, such as trimming finger nails, is not mutilation, since they are not *vital* parts, parts necessary for the healthy functioning of the organism. Further, removing organs that are not now but will likely in the future inhibit health (such as a mastectomy upon discovery of precancerous growths) also is not mutilation.

Should the trophoblast—the forerunner to the placenta—be considered a vital organ of the embryo, a vital organ that is mutilated by the use of MXT? There are considerations for and against considering the trophoblast an organ of the embryo. The reasons for considering the trophoblast an organ of the embryo include that the trophoblast shares the same DNA as the newly conceived human being; it does not share the DNA of the mother. Further, the fact that the trophoblast is shed at birth does not count against its being a part of the embryo, for the same is true of baby teeth which are truly parts of a human being but parts that in later stages of maturity are discarded. In addition, some medical literature refers to the trophoblast as an organ.²⁹

Other authors suggest that the placenta, and by implication the implanted trophoblast, should be considered an organ of *both* the mother and the human embryo or fetus.³⁰ Arthur Vermeersch holds that the “placenta is a common organ” to both the mother and the unborn child.³¹ If the trophoblast, and later placenta, are considered to be organs of the mother (also),

then double-effect reasoning would seem to allow the MXT for the treatment of the mother's pathological organ—the trophoblast invading the fallopian tube. In other words, a part of the mother is impinging harmfully on another part of the mother.

Other considerations lead to the conclusion that the implanted trophoblast should not be considered an organ of the embryo. The ability of the trophoblast to continue to survive following the death of the embryo suggests that it may not simply be a part of the embryo's body. When an organism dies, the various vital organs of the organism—heart, liver, lungs, etc.—rapidly deteriorate unless artificially sustained. Human cells live, and even organs can continue to survive, only if placed in an artificial environment that mimics the natural context that the cells or organs formerly enjoyed. By contrast, the trophoblast often continues its natural growth hours, days, and even weeks after the death of the embryo, without any artificial intervention. This would suggest that the trophoblast is not simply a part of the embryo, akin to the heart, lungs, or liver of more mature human beings.

Further, organs, as parts of a whole human body, have mutually beneficial actions for the good of the whole and each other (the heart pumps oxygenated blood from the lungs which in turn receives the circulating blood from the heart). By contrast, the trophoblast, and later the placenta and umbilical cord, simply benefit the embryo. There is no “mutual benefit” typical of an organ, and so therefore the trophoblast would not seem to be simply a part of the embryo. Finally, the fact that the embryo needs the trophoblast to survive does not show that it is a “vital organ” of the embryo. The embryo also needs the mother to survive, but she is not a vital organ of the embryo. The fact that the embryo and the trophoblast share DNA also does not show that the trophoblast is a vital organ, for, many other parts of me (such as my hair) share DNA but are not vital organs. If the trophoblast is not an organ of the embryo, MXT would not be ethically impermissible in so far as it interfered with the trophoblast.

However, for the sake of argument, let us assume that the trophoblast is an organ of the embryo. The question then becomes is this a case of *intentional* mutilation. The fact that MXT acts *directly upon* the trophoblast and not for the benefit of the trophoblast does not indicate that it is intentional mutilation. Ioannes de Lugo, S.J. (1583–1660) argued that if an unjust aggressor uses an innocent child as a human shield, a person may defend himself against the attack by, for example, throwing a javelin through the human shield in order to kill the aggressor. Such an act, he held, is not intentional killing or intentional mutilation of the child.³² As the contemporary authors John Finnis, Germain Grisez, and Joseph Boyle point out: “in general, the fact that an act is done to (or ‘upon’) [person] X for the sake of [person] Y,

or to Y for the sake of Y, provides no criterion for distinguishing between what is intended and what is accepted as a side effect."³³ In these cases—the strategic bomber, the horseman evading an attacker, and the human shield—damage is done against the body of an innocent person not for the benefit of this innocent person, yet this damage does not define the act but rather is a side effect of an ethically legitimate act. If this reasoning is correct, then the ongoing damaging of the tube caused by the trophoblast is a pathology that may be licitly treated by MXT.

On the other hand, several considerations suggest that the use of MXT may indeed be intentional mutilation by seeking to inhibit the *normal* growth of the trophoblast (albeit situated in an *abnormal* location). I have suggested elsewhere that the following characteristics help distinguish intended effects from side effects:³⁴ 1) the achievement of the effect presents a problem for the agent that occasions deliberation; 2) the achievement of the effect constrains other intentions of the agent; 3) the agent endeavors to achieve the effect, perhaps being forced to return to deliberation if circumstances change; and 4) the failure of the agent to realize the effect is a failure in the agent's plan. If these characteristics are accepted, then inhibiting cellular reproduction in the trophoblast is intended. How to inhibit cellular reproduction *in both* is precisely the problem for the agent that occasions deliberation about how powerful a dose and at what frequency doses of MXT should be given. The achievement of the effect constrains the other intentions of the doctor who must be careful not to prescribe any medications that will interfere with MXT's ability to inhibit cellular reproduction. The doctor endeavors to achieve the effect, perhaps being forced to adjust dosages if the desired effect does not transpire. Finally, it will be accounted a failure for the doctor prescribing MXT if the cellular inhibition does not take place. Given that the cellular inhibition is intended, is it also intentional mutilation?

I have suggested that mutilation might be defined as the *intentional* destruction or removal of an organ (or other *vital* body part) that inhibits the function that the organ has *or will likely have* in maintaining the health of the one possessing the organ. On the face of it, the inhibition of the cell divisions of the trophoblast would seem to fulfill this definition. However, since the embryo in the tubal pregnancy may be in the process of dying from other causes when the MXT is administered, it may be that MXT does not hasten the death of the fetus and therefore does not interfere with the function the organ has in promoting the health of the embryo.³⁵ Similarly, Dr. Alan Shewmon has argued that a severely injured person may be taken off life-support and, once the dying process has begun, vital organs may be removed without hastening death and without this being considered intentional mutilation.³⁶ So, the permissibility of the use of MXT to treat tubal pregnancy may hinge

on whether in a given case the MXT hastens death, a sign that mutilation has taken place.

These points are certainly debatable; and at this stage of the ethical conversation, the discussion about the permissibility of MXT has not reached a conclusion either through the consensus of ethicists or through an intervention from the Church's magisterium. I wish to emphasize again that in the vast majority of actual cases in which MXT is medically indicated, the death of the embryo has indeed already occurred.

One possible difficulty with the analysis I have presented is that perhaps the views I expressed about salpingostomy conflict with what I have said about MXT. If it were possible to remove the human embryo from the fallopian tube and implant it *in utero*, then wouldn't this option be not merely permissible but morally required thereby excluding the permissibility of using MXT?

This difficulty is hypothetical of course since we do not currently have any reliable way of removing an ectopic embryo from the tube and placing it in the uterus. Even if this treatment were possible, in trying to save the life of the human embryo—like trying to save the life of any other human being—we need not make use of every treatment available in every circumstance. In each case, the burdens and benefits of the treatment must be considered, and treatments that are more burdensome than beneficial may be forgone. This consideration could render salpingostomy as permissible but not necessarily morally required.

Having examined the issue of ectopic pregnancy in some detail, what concretely should be done in terms of practice, for example, in Catholic hospitals? There is no debate about medical management as well as removal of the tube along with the embryo (salpingectomy). About the removal of the embryo alone leaving the tube intact (salpingostomy) as well as the use of MXT, there remains a lively debate as to how the principles widely accepted by those who defend the equal basic dignity of all human persons apply to cases of tubal pregnancy.

The theory of probabilism may be relevant in terms of guiding action in these matters. When there are legitimate doubts about the application of a certain moral norm or about matters of fact, probabilism holds that one is free to form an opinion that "one presentation of the facts or application of the law is probable, even if others hold an opposite and also probable opinion."³⁷ If probabilism is applied in these cases, it would seem to follow that Catholic hospitals should be permitted to make use of all of the medical procedures discussed in this paper—medical management, removal of the pathological tube with the embryo within it, removal of the embryo alone,

and the use of methotrexate—until such time as the doubt about the issue has been removed.

References

¹ On February 7, 2007, a version of this paper was presented, with the title, “Ectopic Pregnancy and the Catholic Hospital,” to a group of 170 bishops and ten cardinals from the U.S., Canada, Mexico, Central America, the Caribbean, the Philippines, India, and Europe at a conference titled “*Urged on by Christ: Catholic Health Care in Tension with Contemporary Culture*,” the twenty-first bishops workshop, Dallas, Texas.

² Kelly Bowring, “The Moral Dilemma of Management Procedures for Ectopic Pregnancy,” in *Life and Learning*, vol. 12, *Proceedings of the Twelfth University Faculty for Life Conference at Ave Maria Law School 2002*, ed. Joseph W. Koterski, S.J. (Washington, D.C.: University Faculty for Life, 2003), 101.

³ Pope John Paul II wrote: “by the authority which Christ conferred upon Peter and his successors, in communion with the bishops—who on various occasions have condemned abortion and who in the aforementioned consultation, albeit dispersed throughout the world, have shown unanimous agreement concerning this doctrine—I declare that direct abortion, that is, abortion willed as an end or as a means, always constitutes a grave moral disorder, since it is the deliberate killing of an innocent human being.” Pope John Paul II, *Evangelium vitae* (Vatican City: Libreria Editrice Vaticana, 1995), n. 62.

⁴ John Rock, *TeLinde’s Operative Gynecology* (Philadelphia: Lippincott-Raven Publishers, 1992), 420.

⁵ Some authors hold that salpingostomy is not intentional abortion, see, for example, Germain Grisez, *Abortion: The Myths, the Realities, the Arguments* (Cleveland/New York: Corpus Books, 1970), 340–341; Albert Moraczewski, “Managing Tubal Pregnancies: Part I,” *Ethics and Medics* 21.6 (June 1996): 1–4. Other authors believe that salpingostomy is intentional abortion, see, for example, Peter A. Clark, “Methotrexate and Tubal Pregnancies: Direct or Indirect Abortion?” *Linacre Quarterly* 67.1 (2000): 7–24; Bowring, “The Moral Dilemma of Management Procedures for Ectopic Pregnancy,” 116.

⁶ For a discussion of this once-debated case, see John Connery, *Abortion: The Development of the Roman Catholic Perspective* (Chicago: Loyola University Press, 1977), 295–300.

⁷ L. Shettles, “Tubal Embryo Successfully Transplanted in Utero,” *American Journal of Obstetrics and Gynecology* 163 (1990): 2026.

⁸ C.J. Wallace, “Transplantation of Ectopic Pregnancy from Fallopian Tube to Cavity of Uterus,” *Surgery Gynecology, and Obstetrics* 24 (1917): 578–579. I have heard both cases explained in terms of heterotopic pregnancy, one tubal pregnancy and the

other *in utero*. This is possible, but the conjecture lacks evidence.

⁹ William May writes: “I contend that it is morally imperative today to make every effort possible to discover and transplant into the uterus those unborn babies who have, unfortunately, implanted in the fallopian tube or other ectopic sites and not in the uterus where they belong.” May, “The Management of Ectopic Pregnancies: A Moral Analysis,” in *The Fetal Tissue Issue: Medical and Ethical Aspects*, eds. Peter J. Cataldo and Albert S. Moraczewski, O.P. (Braintree, MA: The Pope John Center, 1994), 146. In his book, *Catholic Bioethics and the Gift of Human Life*, 2nd ed. (Huntington, IN: Our Sunday Visitor Publishing, 2008), William May reverses his previous position on the use of methotrexate to treat ectopic pregnancy. He no longer views its use as intentional killing of the embryo.

Eugene F. Diamond writes: “The long-term hoped-for solution to the dilemma will be the development of successful techniques for the transplantation of fetuses growing in ectopic location into the uterine cavity.” Diamond, “Moral and Medical Considerations in the Management of Extrauterine Pregnancy,” *Linacre Quarterly* 66.3 (1999): 11.

Bowring writes: “This [transplantation technique] needs to be reconsidered and pursued, especially with the certainty that it is not just plausible, but possible. Convincing the medical field to focus on re-implantation is the true moral imperative in the issue of managing ectopic pregnancy today.” Bowring, “The Moral Dilemma of Management Procedures for Ectopic Pregnancy,” 118.

¹⁰ William E. May, “Methotrexate and Ectopic Pregnancy,” *Ethics and Medics* 23.3 (1998). For his more recent position, one that accepts the use of methotrexate and salpingostomy, see May, *Catholic Bioethics and the Gift of Human Life*, 201–202.

¹¹ I would like to thank the chief of maternal fetal medicine at the University of Southern California, T. Murphy Goodwin, M.D., as well as Bryron Calhoun, M.D., the National Medical Advisor for the National Institute of Life Advocates who answered many of my questions about the medical practices discussed in this paper. A reviewer objected to this point noting, “The author has a problem ... (of which he may not be aware) in characterizing salpingostomy as not being an attack on the embryo because it can be removed intact. The difficulty is that such a characterization relies on understanding the procedure as one done via laparotomy as opposed to laparoscopy. Laparoscopic salpingostomy does not allow the same sort of unimpeded access to the fallopian tube that laparotomy does. Since most procedures for unruptured ectopic pregnancy are now done laparoscopically, the procedure is often far less discriminating in how intact the embryo remains. [In a laparoscopic salpingostomy] the ectopic pregnancy is removed blindly without any concern for removing it as a discrete and intact entity. Perhaps this point could be addressed given the economic and medical pressures to perform this procedure laparoscopically.” This consideration is important but it does implicitly presuppose what I was trying to show that salpingostomy can be (if performed via laparotomy) in such a way as to preserve the bodily integrity of the embryo. A laparoscopic salpingostomy does not do this, but I address this case in the next paragraph of the body of my essay.

¹² Thomas Aquinas, *Summa theologiae*, II-II, q. 64, a. 7.

- ¹³ See, John C. Ford, S.J., “The Morality of Obliteration Bombing,” *Theological Studies* 5 (1944): 261–309.
- ¹⁴ United States Conference of Catholic Bishops, *Ethical and Religious Directives for Catholic Health Care Services*, 4th ed. (Washington, D.C.: USCCB, 2001).
- ¹⁵ Statistic cited by Charles E. Cavagnaro III, M.D., in “Treating Ectopic Pregnancy: A Moral Analysis (Part II),” *NaProEthics Forum* 4.2 (1999): 4.
- ¹⁶ R.J. Morlock et al. “Cost-Effectiveness of Single-Dose Methotrexate Compared with Laparoscopic Treatment of Ectopic Pregnancy,” *Obstetrics and Gynecology* 95 (2000): 407–412.
- ¹⁷ Physicians Vicken Sepilian and Ellen Wood write: “A bhCG level of greater than 15,000 IU/L, fetal cardiac activity, and free fluid in the cul-de-sac on US (presumably representing tubal rupture) are contraindications [for MXT].” Sepilian and Wood, “Ectopic Pregnancy” (2007), <http://www.emedicine.com/med/topic3212.htm>.
- ¹⁸ Sepilian and Wood, note: “embryonic cardiac motion can be observed 3.5–4 weeks postconception, about 5.5–6 weeks after the last menstrual period.” Sepilian and Wood, “Ectopic Pregnancy.”
- ¹⁹ A number of ethicists have argued that the use of methotrexate is morally impermissible, for example, Charles E. Cavagnaro, Thomas W. Hilgers, and Bernard Nathanson. Others hold that its use to treat tubal pregnancy is permissible, for example, Albert Moraczewski, O.P., Benedict Ashley, O.P., Patrick Norris, O.P., and Peter Clark, S.J.
- ²⁰ Although some experiments have been done directly injecting the embryo, it should also be noted that MXT as normally used is not administered directly upon the body of the embryo, but rather is taken orally by the woman or via injection into her body. Thus, even if “acting upon the body” of the embryo were morally dispositive for determining intentional effects as opposed to side effects, it is not relevant for the normal use of MXT.
- ²¹ Connery, *Abortion*, 162. As a reviewer helpfully noted, Raynaud himself thought the ectopic fetus was an unjust aggressor and that the distinction between “direct” and “indirect” was not relevant in such cases. Nevertheless, the colorful example does illustrate the general principle that neither the *certainty* of the effect nor *acting upon* the body of another entails that a lethal effect which follows from the action must be intended.
- ²² Albert Moraczewski, “Managing Tubal Pregnancies: Part II,” *Ethics and Medics* 21.8 (August 1996): 4.
- ²³ I argue this point further in my book, *The Edge of Life: Human Dignity and Contemporary Bioethics* (Dordrecht: Springer, 2005), ch. six. A version of this chapter can also be found in “Moral Absolutism and Ectopic Pregnancy,” *Journal of Medicine and Philosophy* 26 (2001): 61–74.
- ²⁴ The rest of this paragraph is drawn virtually verbatim from one of the reviewer’s reports.

- ²⁵ John Finnis, Germain Grisez, and Joseph Boyle, “‘Direct’ and ‘Indirect’: A Reply to Critics of Our Action Theory,” *Thomist* 65 (2001): 20.
- ²⁶ William E. May, “Methotrexate and Ectopic Pregnancy,” *Ethics & Medics* 23.3 (March 1998): 1–2. As noted previously, in a later work, *Catholic Bioethics and the Gift of Human Life*, May came to accept as morally permissible the use of methotrexate.
- ²⁷ May, “Methotrexate and Ectopic Pregnancy,” 3.
- ²⁸ These matters have been debated in other contexts as well. See, Christopher Kaczor, “Intention, Foresight, and Mutilation: A Response to Giebel,” *International Philosophical Quarterly* 47 (2007): 481–486.
- ²⁹ Bowring, “The Moral Dilemma of Management Procedures for Ectopic Pregnancy,” 109.
- ³⁰ For example, Cavagnaro speaks of “the shared maternal-fetal organ of pregnancy—the placenta,” in “Treating Ectopic Pregnancy: A Moral Analysis (Part II),” 4.
- ³¹ Connery, *Abortion*, 300.
- ³² *Ibid.*, 177. A reviewer of this article point out that on Connery’s understanding of Lugo’s view, methotrexate would not however be licit. I only make reference to the example here to illustrate that acting upon a person is not necessarily to intentionally mutilate that person.
- ³³ Finnis, Grisez, and Boyle, “‘Direct’ and ‘Indirect,’” 28–29.
- ³⁴ Kaczor, “Moral Absolutism and Ectopic Pregnancy,” 61–74.
- ³⁵ I owe this insight to Alexander Pruss, personal conversation.
- ³⁶ D. Alan Shewmon, “The Dead Donor Rule: Lessons from Linguistics,” *Kennedy Institute of Ethics Journal* 14 (2004): 293–295.
- ³⁷ John F. Tuohey, “The Implications of the *Ethical and Religious Directives for Catholic Health Care Services* on the Clinical Practice of Resolving Ectopic Pregnancies,” *Louvain Studies* 20 (1995): 46.