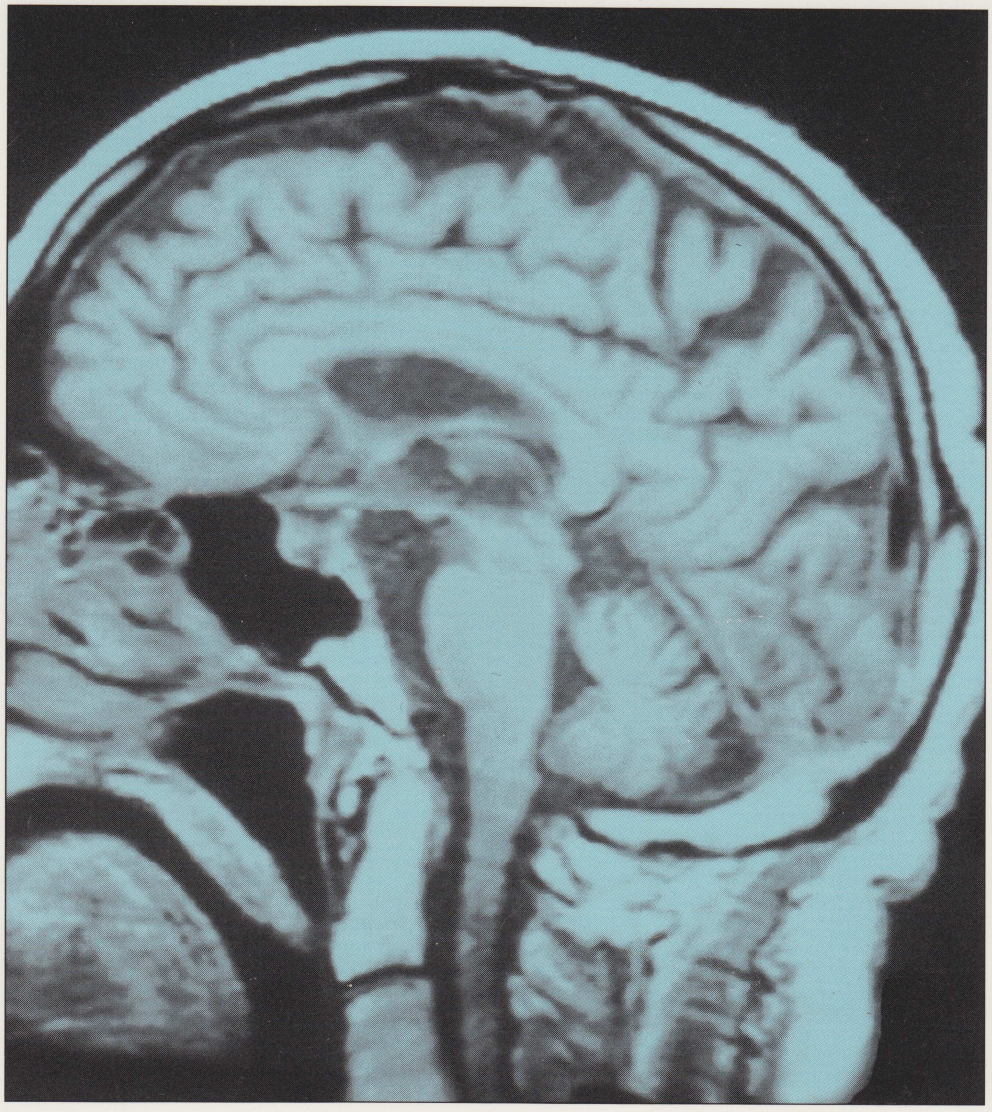
Ethics & Medicine

An International Journal of Bioethics



Vol 18:2
Summer 2002
ISSN 0266-688X

Ethics & Medicine

An International Journal of Bioethics

VOL 18:2, SUMMER 2002

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Vol 18:2, Summer 2002

EDITORIAL: HURTLING TOWARD EUGENICS...AGAIN

C BEN MITCHELL, PHD

Preimplantation genetic screening is the latest assault against a truly human future. According to a report in the 27 February *Journal of the American Medical Association*, a 30-year-old woman has chosen to use the technique because she carries the rare gene for early onset Alzheimer's disease. This particular variety of Alzheimer's reportedly affects adults by the time they are 40 years of age.

The unidentified woman had a baby girl who is allegedly free from the Alzheimer's gene because she was selected from a number of embryos, some of whom presumably had the gene and were therefore destroyed.

Prenatal Screening

Prenatal genetic screening may be performed either before implantation or in utero. In preimplantation screening, embryos are tested for certain genetic conditions and either implanted or destroyed depending on the wishes of the prospective parents. In post-implantation screening, unborn children are tested in the womb to see if they are carrying deleterious genes and either carried to term or aborted.

Previously, almost all prenatal genetic screening was used in connection with abortion decisions. Since there are so few genetic therapies, prospective parents are faced either with the knowledge that their child will carry a disease gene when he or she is born or may decide to terminate the pregnancy through abortion. Some parents who would not choose embryo selection or abortion may refuse prenatal genetic testing, since they intend to bring a child to term regardless of genetic condition. Others may find the information important as they prepare for a child who may have disabilities.

In this case, embryos were created using in vitro fertilization techniques, and the embryos were genetically screened. "Acceptable" embryos were implanted and "undesirable" embryos were destroyed or may have been used in research. But who decides what is a disease gene and what is merely a different genetic condition? Who decides who is a "desirable" or "undesirable" embryo?

Rutgers University sociologist Marque-Louisa Miringoff has observed:

> In the pursuit of good health, we have begun to tread a fine line in "human selection." We often choose to rule out certain diseases or, more accurately, certain human beings with those diseases. In some cases, as with Tay-Sachs disease, an as of now invariably fatal illness in early childhood, such a decision may be motivated by compassion. From many viewpoints, there is little quality of life in any sense traditionally understood, and great anguish and tragedy.
>
> Other diseases, however, challenge our logic more severely; our sense of balance between cost and benefit is not clear. Huntington's chorea is a case

> in point. Would a Woodie Guthrie be born today? Would his parents, as carriers of the disease, bear a child with the known risk? Could we now or soon screen him out prenatally? If the pace of genetic intervention continues, such an individual would not be born. Yet, I for one, am glad that he lived, although I mourn the anguish of his later life. One wonders, too, whether some perception of his coming illness contributed to the extraordinary creativity of his life.
>
> Clearly, it is a just and meaningful desire to prevent fatal and debilitating diseases. Yet in pursuing this goal, we pay unobserved costs. In eliminating individuals with unwanted diseases, we also create a mind-set that justifies the process of human selection. We thus move into the questionable arena of human worth, and to some degree eugenic thought. We forgo the idea of therapeutic change (i.e., dietary change or other forms of treatment) and opt instead for elimination. Individuals are seen as flawed. It is easier and more desirable to prevent their existence than to work for their survival.[1]

Who knows who the other "Alzheimer's children" might have grown up to be? Might they have been the next Woody Guthrie, Beethoven, Mozart, or Bach? Might they have been the brilliant scientists who discovered the cure for their own disease? We will never know because they were selected out as an "undesirable."

The New Eugenics

"Eugenics" is a compound word from two Greek words meaning "good" and "genes." The eugenics movement began at the turn of the last century in England and the United States. Under the leadership of social engineers such as Francis Galton and Charles Davenport, the eugenics movement became a powerful social force.

So-called "Fitter Families" contests were held across the United States in the 1920s and 1930s. Fitter families were families with fewer incidences of physical and mental disability. Their ethnic heritage also had to remain intact. Racial intermarriage disqualified families. Thus, the fitter families were exclusively Caucasian. Mary T. Watts, co-founder of the first contest at the 1920 Kansas Free Fair, said: "While the stock judges are testing the Holsteins, Jerseys, and whitefaces in the stock pavilion, we are judging the Joneses, Smiths, and Johns." Winners were given a medal inscribed with the slogan, "Yea, I Have a Goodly Heritage."

The eugenics movement tried to create "better humans through better breeding." Yet breeding was not the only way to achieve the desired goals. In order to prevent "undesirables" from reproducing, mandatory sterilization laws were enacted. The "feebleminded," "indolent," and "licentious" were sterilized either without their consent or against their wills. So-called "eugenical sterilizations" increased from around 3,000 in 1907 to over 22,000 in 1935. By the 1930s most states had mandatory sterilization laws. In one well-known case, a young mentally retarded girl named Carrie Buck was given the "choice" either to be sterilized or to be returned to her asylum. Because both her mother and

grandmother had been mentally retarded, the famous jurist Oliver Wendall Holmes declared of Carrie Buck, "three generations of imbeciles is enough" and mandated that she be sterilized. For information and hundreds of pictures from the American eugenics movement see www.eugenicsarchive.org/eugenics

With the power of genetic technology, a new eugenics has emerged. A 1993 March of Dimes poll found that 11% of parents said they would abort a fetus whose genome was predisposed to obesity. Four out of five would abort a fetus if it would grow up with a disability. Forty-three percent said they would use genetic engineering if available simply to enhance their child's appearance.

Increasingly, college age women are being solicited for their donor eggs on the basis of their desirable genetic traits. In the summer of 2000, the Minnesota Daily, the student newspaper of the University of Minnesota, ran an ad for egg donors. Preferred donors were women 5 foot six inches or taller, Caucasian, with high ACT or SAT scores, with no genetic illnesses, and extra compensation was offered to those with mathematical, musical, or athletic abilities. The ad stated that acceptable donors would be offered as much as $80,000 for their eggs.

Preimplantation genetic screening is another weapon in the eugenics arsenal. This case puts our feet more than half way down the slippery slope. Selection of our offspring has never been easier. Embryonic death has never been more acceptable in our culture. This is eugenics with a vengeance.

Our culture's emphasis on the genetically "fit" and our difficulty in embracing those who are "less fit" fuels this new eugenics mindset. We must resist the new eugenicists if we are to preserve a truly human future. E&M

1 *The Social Costs of Genetic Welfare*, Rutgers University Press, 1991: 159-160.

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GUEST COMMENTARY: TOWARD A COMMON LANGUAGE OF HUMAN DIGNITY

WILLIAM P CHESHIRE, JR, MD

Speaking from the White House on April 9, President Bush chose these words to frame his statement in support of legislation to ban experiments in human cloning: "As we seek to improve human life, we must always preserve human dignity."

The noble aspiration to preserve human dignity has broad appeal. And yet this language of consensus is also a language of nuanced plurality. For example, what the coalition Do No Harm means by "the essential dignity of every human being," is altogether different from what is implied in the Oregonian political slogan, "death with dignity." The latter places dignity within an extreme interpretation of individual autonomy, while the former imputes dignity to all people, including those too vulnerable to exercise autonomy. Whether to promote death or protect life, both march beneath the banner of dignity, tugging it at times in opposite directions.

Contradictions in usage by no means invalidate all possible interpretations. Nevertheless, some have questioned whether "human dignity," an emotionally-laden phrase used to dignify various political causes, is sufficiently well-defined to serve as a useful term in bioethical discourse. Its colloquial use is often vague. A more rigorous attempt at a precise definition might risk dividing public discourse and dismantling consensus where unity is desirable.

It would hardly befit the dignity of human beings, however, to settle for a consensus that tolerates contradictions when the basis in truth for a deeper, more satisfying consensus lies, for those who will accept it, within reach. Now that society has approached the brink of human cloning, the need for a valid understanding of human dignity is unprecedented. It is also urgent. Biotechnology has already begun to supply the tools capable of altering the basic genetic structure and familial relationships of human beings. If human dignity is to be preserved, we must hold fast also to the language of human dignity.

What is human dignity? Is dignity an arbitrary cultural construction conditioned by the times and pragmatically tied to preferences for this or that agenda? No, dignity touches on something more profound. There really is such a thing as human dignity.

The *Oxford English Dictionary* defines "dignity" as "the quality of being worthy or honourable." Human dignity thus denotes that particular dignity which human beings uniquely possess. It is not that all human actions are morally praiseworthy, but humans are, by their nature, worthy of a special level of respect fundamentally above that of nonhuman animals and beyond that of the most intelligent computers.

At stake in defining human dignity is not the question of when a human

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being acquires dignity but whether human beings have intrinsic dignity. A frequent mistake is to equate dignity with certain functional capacities such as intelligence, abstract reason, language, creativity, ability to feel pain, empathy, awareness of personal biography over time, health, or beauty. In contrast to abstract dignity these capacities at first glance seem more clear in that they are visible, tangible, and measurable.

Beware of substitutions. If a measurable attribute were to supplant the idea of dignity, which human beings would no longer measure up to the preferred standard? If a quantifiable marker, then which men and women, whose grandparents, whose children, would come up short? Since functional capacities accrue with age and by degrees, many people possess them in slight degree, and others may lose some of them altogether. A concept of human dignity contingent on functional capacities is very attractive to proponents of utilitarian theory because from measurements come direct comparisons. Human life, to be sure, does not belong on the balance scale with property. The utilitarian calculus coldly authorizes violating human dignity in cases where a greater good for the greater number is anticipated. Such thinking eventually calls into question the rights and worth of the most vulnerable members of society. And all of us at one time or another are vulnerable and potentially eligible for exclusion.

Thinking in terms of disposable dignity is very near to imagining disposable people. One feature that constitutes the most tangible limit of dignity is that one rightfully responds in moral outrage whenever that dignity in others is threatened or denied. Sadly, the capacity for moral outrage is also subject to attenuation and distraction. The systematic designation of a class of living human nonpersons of unproven dignity would portend a grave moral crisis.

Cloning, for example, threatens human dignity because it would instrumentalize and commodify human beings, deny them individuality, and treat them as products to be designed and manufactured according to another's specifications. Cloning for purposes of reproduction would confound natural familial relationships and their accompanying moral responsibility. Cloning for purposes of research would require the destruction of nascent human lives grown simply to become the means to others' ends.

Human dignity is at its core an ontological reality irreducible to perceptual esthetic categories. The word "dignity" is thus appropriate to beings who are substances and not mere collections of properties. Dignity bespeaks something inseparable from human nature, something placed there, something shared by all people. One comprehends dignity less through reason and more through intuition, in a way that is comprehensible to human reflection universally. No scientist or physician has ever observed human dignity; it is an inference. Forever escaping the nets of scientific measurement, dignity defies devaluation.

In the same way that human dignity precedes the actualization of important functional capacities, the writer of Hebrews commented, "By faith we understand that the worlds were framed by the word of God, so that the things which are seen were not made of things which are visible."(Hebrews 11:3, NKJ). For the Christian, the notion of human dignity is rooted in the biblical text which records

that men and women are created in the image and likeness of God (Genesis 1:26, 9:6). This *imago Dei* is not attached to any functional characteristics of humans but is simply identified with that which is human. Invisible and indivisible, the special value in human dignity comes through God's own vesting, for he has made human beings especially for fellowship with himself.

God supremely affirmed the dignity of human life by becoming in Jesus Christ a man and dwelling with us (Isaiah 7:14; Luke 1:30-31, 41; John 1:14). Jesus, now resurrected, retains his humanity and calls us to lives in which our human dignity may be perfected in him.

Even though the authority of Holy Scripture is not everywhere welcomed, the phrase "human dignity" coincides with the biblical ideal of worthiness due respect and lays an ethical foundation for treating fellow human beings in a manner pleasing to God. The words "human dignity" also provide a secularly accessible language on which a pluralistic society can find common moral ground. This is not an exclusively Christian ideal. Elaborating on Genesis 1:26, Plaut's Jewish commentary on the *Torah* explains that humanity's likeness to the Divine, "stresses the essential holiness and, by implication, the dignity of all men, without any distinctions."

Recognition of intrinsic human dignity extends, furthermore, beyond religious traditions. Cumulative human experience having found dignity to be a valid moral principle, it is also a hallmark of civilization. Article 1 of the 1948 Universal Declaration of Human Rights stipulates that, "All human beings are born free and equal in dignity and rights." Likewise, the principle of individual autonomy preeminent in much bioethical discourse is grounded in the respect for persons that flows out of a robust appreciation of human dignity. Although an explicit definition of human dignity is seldom offered, its significance is assumed in the practical outworkings spelled out in the language of human rights and autonomy. These basic human rights make sense only if moral right and wrong are grounded in transcendent relationships.

The founders of the American government recognized human dignity to be the basis of the rights and liberties due moral, rational beings. For example, the Society of the Cincinnati, a fraternal association founded by the officers of the American Revolution, in 1783 advanced the following "immutable" principle: "An incessant attention to preserve inviolate those exalted rights and liberties of human nature, for which they have fought and bled, and without which the high rank of a rational being is a curse instead of a blessing."

Human dignity deserves a place as part of our common language only as long we appreciate that all people hold this dignity in common. A pluralistic society will inevitably hold this standard in tension with competing ideas about what constitutes human dignity. That is why there is a continuing need for dynamic translation of the biblical principles underlying dignity into the common language. Successful translation also requires that Christians lead lives consistent with those principles.

Language can define human dignity but imperfectly. The most rigorous terminology can acknowledge it but cannot explain its origin. Vocabulary can

address it but cannot own it. Words can comment upon it, note its triumphs and failures, and gesturing through metaphor point beyond themselves, but they cannot lay hold of the thing itself which is human dignity. Once all opinions have been voiced and doubt has exhausted its last breath, human dignity remains, authentic yet inexpressible, a wondrous unanalyzable mystery.

A suggested definition of human dignity is as follows: The exalted moral status which every being of human origin uniquely possesses. Human dignity is a given reality, intrinsic to the human substance, and not contingent upon any functional capacities which vary in degree. Evidence of this status may be found in such faculties as abstract reasoning, language, conscience, and free will, which human beings have the capacity to develop and exercise unless limited by disease, coercion, or the will. The possession of human dignity carries certain immutable moral obligations. These include, concerning the treatment of all other human beings, the duty to preserve life, liberty, and the security of persons, and concerning animals and nature, responsibilities of stewardship. A Christian understanding of human dignity will add to this the obligation to worship and magnify the Lord God, whose mercy endures forever. E&M

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THE ORAL CONTRACEPTIVE PILL AND THE PRINCIPLE OF DOUBLE EFFECT

SISTER RENEE MIRKES, OSF, PHD

The question of whether the low-dose combined estrogen and progesterone oral contraceptive pill (OCP)[1] is an abortifacient has evoked considerable discussion[2] within the pro-life medical community. The main lines of the debate bifurcate between one contingent of pro-life physicians who oppose abortion *and* contraception and another who oppose abortion *but not* contraception.[3]

Some clinicians and ethicists in the first group object to the combined OCP based on good indirect evidence that it could cause the death of an early embryo.[4] Others in this group broaden their moral opposition to include the primary effect of the OCP: direct suppression of fertility for procreative (family-planning) purposes. For the latter, moral objection to the OCP would continue even if it were proven that it was not an abortifacient.[5]

Pro-life physicians in the second group morally oppose abortion but, because they view hormonal contraception as an effective method of family planning that also has impressive health benefits, do not take moral issue with the low-dose combined oral contraceptive (COC) and, therefore, prescribe it to their female patients. Furthermore, these physicians maintain that, given the lack of direct, and compelling indirect, evidence for its abortifacient character, prescription of the OCP is morally justified.

Background

In a previously published article in *Ethics & Medicine* 17:1, Joel Goodnough, M.D. weighs in on the abortifacient question and its implications for obtaining informed consent from OCP-users.[6] He concludes that the most commonly prescribed oral contraceptive, the COC, is designed and intended to suppress ovulation and, therefore, to prevent conception. Though he admits that the COC has the potential for failure due to user error or decreased absorption, he also maintains that, if such a failure were to occur and result in the death of the embryo, it would be an unintended adverse side effect. Goodnough argues that, while physicians may want to inform their patients of this possibility in obtaining their properly informed consent, the most reasonable way of dealing with the moral ambiguity is not to discourage the use of OCPs altogether but to encourage, instead, responsible pill-taking.

Goodnough bolsters his thesis, first, with scientific documentation from the primary research of pertinent studies in the literature and, second, with moral corroboration from the principle of double effect.[7] Using the latter, he concludes that, in the act of the prescription or use of the COC, the good of conception control is what the physician-prescriber (or the COC-user) intends (directly wills) while the evil of the possible death of the embryo is what the moral agent accepts as an unintended side effect and, therefore, what lies outside his/her intention.

My contribution to the ongoing debate outlined above is twofold: first, to

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advance data from relevant medical/scientific literature which calls into question and encourages re-examination of Goodnough's conclusion that indirect evidence for the COC's post-fertilization effects is negligible (part one); second, to challenge his use of the principle of double effect to morally justify the prescription of the COC (part two).

Part One: Critique of the Scientific Evidence

No direct evidence; no substantive indirect evidence: "[I]t is not possible to say that the combined OCP causes abortions."[8] Goodnough insists that, first, there is no direct evidence for the abortifacient character of the COC and, second, the indirect evidence for such a position is inconclusive and/or negligible and based on "unfounded fears."[9]

Response: I certainly agree that there is no direct evidence that the COC causes abortions. And if its post-fertilization effects (its anti-implantation mechanisms operative pre-, peri-, or post-implantation) were studied directly, it would either involve techniques and procedures that are immoral by virtue of destroying early embryonic life or involve studies that would be moral but non-definitive since they would include indicators such as the Early Pregnancy Factor (EPF) [a pregnancy-associated immunosuppressive protein detected in maternal sera by rosette inhibition assay that, to date, provides a less than acceptable accuracy index]. However, in the rest of this segment, I hope to substantiate that there is good indirect evidence that post-fertilization effects play a small, yet not negligible, role in loss of embryonic life induced by the COC. The principal deficiency of the indirect evidence is a paucity of published data that prevents the quantification of that risk in absolute terms.[10]

A) Ovulation rates on the pill: Goodnough argues that there is no evidence to support the occurrence of ovulation in excess of that of the pregnancy rate for normal use of the OCP (3% for 100 woman years).[11] The pertinent studies he cites show that, while there is evidence of ovulatory or ovarian activity among COC-users, there is no evidence of ovulation. Only studies that include progesterone only pill (POP)-users along with COC-users show breakthrough ovulation.

Response: It is relevant to point out that evidence of ovarian activity on the OCP does not necessarily include normal ovulation. Nevertheless, pertinent literature demonstrates that, to determine whether ovarian activity does include ovulation, it is critical to study more than three cycles. The available evidence suggests that breakthrough ovulation may become more common with increasing duration of OCP use. In investigations involving 4 or more cycles, ovulation did occur. Breakthrough ovulation was more likely in women using OCs with lower doses (or no dose) of estrogen and with women whose use of the OCP is imperfect rather than perfect. Ovulation rates (ORs) for COC-users ranges from 1.7%[12] to 28.6% per cycle.[13] The former figure comes out of a 6-cycle study (Grimes et al.) that, because it is based on ultrasound investigation, supplies incontrovertible evidence for ovulation; the 28.6% figure is based on a 4-cycle study (Chowdhury et al.) that, although it provides less conclusive evidence since it is hormonally based, does demonstrate that, with imperfect or normal use, 10 out of 35 women ovulated by the fourth cycle and, with perfect use, 10% or 1 out of 10 women showed a rise of progesterone suggesting ovulation. ORs for POP-users for 6 or more cycles range from 33%[14] to 65%[15] per cycle.

As for failure of the hormonal contraceptive to prevent pregnancy, it is necessary to account for the underreporting of elective abortions. If this is considered, the rates of pregnancy on the OCP are estimated at 4% for "good compliers" and 8% (increasing to a possible 29%) for "poor compliers."[16] Logically, these adjusted pregnancy rates must be taken into account in attempting to make the best estimate possible of breakthrough ovulation rates on the OCP.

B) Prevention of Implantation: Goodnough enlists four arguments to defend his position that the OCP's effects on the endometrium do not cause the loss of the embryo.

First, he agrees that it makes sense to postulate that the endometrium during an anovulatory cycle on the OCP is less normal, but that it does not make sense to argue the same during an *ovulatory* cycle. Due to the active presence of endogenous sex hormones associated with ovulation, the endometrium of an ovulatory cycle on the OCP would be more normal and proportionately less likely to be hostile to implantation.[17]

Response: Where are the peer-reviewed data to support Goodnough's postulate regarding the state of the endometrium during ovulatory cycles on the OCP? Just from a common sense perspective, does it seem reasonable to hypothesize that, after perhaps prolonged OC use and its corresponding deleterious effects on the endometrium (average endometrial thickness in OCP-users is 1.1 mm),[18] the same endometrium, following breakthrough ovulation, will immediately spring back from its atrophied, decidual state to that of a normal, non-pregnant (non-secretory) state or even to a normal pregnant (secretory) state? Some IVF studies demonstrate that implantation following embryo transfer does not occur in an endometrium that is less than 6 mm thick.[19]

Second, Goodnough insists that the claim that the OCP-induced changes in the endometrium actually prevent embryo implantation is speculative. While the literature describes the OCP as effecting an endometrium that is inhospitable to implantation, "[n]o literature actually shows that death of the embryo results." Whatever embryo loss occurs following breakthrough ovulation and fertilization, "despite seemingly hostile changes in the endometrium," occurs "at the same rate as the embryo implants and survives in non-OCP users."[20]

Response: As I already noted, I agree that there is no direct evidence for OCP-induced embryo loss. However, in the definition of the mechanisms of the OCP's action (contraception), it is clear that the COC's efficacy is guaranteed by a combination of the pill's effects from both its estrogenic and its progestational agents (that is, from the pill's pre- *and* post-fertilization effects).[21] In the first place, the COC prevents a clinically recognized pregnancy by the estrogenic/progestational effects of its primary mechanism: inhibition of gonadotropin secretion via an effect on both pituitary and hypothalamic centers. The progestational agent suppresses luteinizing hormone (LH) secretion and the estrogenic agent suppresses follicle-stimulating hormone (FSH) secretion via the prevention of the selection and emergence of a dominant follicle. In the second place, the COC assures "good contraceptive efficacy" (translated: prevents a clinically recognized pregnancy) by effects of the pill's (progestational)

secondary mechanisms: changes in the endometrium (creating "a decidualized bed with exhausted and atrophied glands") which make it unreceptive to ovum [sic] implantation; changes in cervical mucus so that it becomes thick and impervious to sperm transport to the uterus; and, changes in the secretion and peristalsis within the fallopian tube that alter embryo transport (and that provide "possible . . . additional contraceptive effects").

It is well known clinically that, during use of OCPs, the regular withdrawal bleeds ("menstrual" bleeds) are lighter than natural menses. A lighter menses indicates a thinner endometrium. Further, once a woman discontinues the use of OCPs, it takes more than one cycle for her menstrual flow to return to the normal level of flow that occurs without OCs. This is clinical evidence that the endometrium does not return immediately to its full thickness when the OC is discontinued altogether. It seems far less likely that it could return to full thickness during a cycle in which the OC is still being taken, albeit, perhaps irregularly.

Due to the COC's almost perfect rate of contraceptive effectiveness during perfect use, Speroff et al. go on to say that the occurrence of a clinically recognized pregnancy while on the pill is most likely not due to any failure of the pill to act as it is estrogenically and progestationally designed, but to extrinsic factors that have nothing to do with the action of the OCP. When taken correctly, the COC approaches 100% contraceptive efficacy, that is, it is almost 100% effective in preventing a clinically recognized pregnancy. Contraceptive failure is most likely due, then, to failure of its users to strictly adhere to the prescribed regimen (such as missing days), to interference from other medications, or to pill-use accompanied by "vomiting and diarrhea."[22]

Furthermore, does not the claim that the embryo implants and survives at the same rate it does in non-OCP users, despite "seemingly" OCP-induced hostile endometrium, imply that *all* embryo loss following breakthrough ovulation on the pill is due *completely* to natural causes and has *nothing* to do with the effects of synthetic hormones? Does not such a claim run directly contrary to the authoritative conclusion of gynecological textbook authors that the COC's efficacy in preventing a clinically recognized pregnancy is due to the comprehensive action of its pre- and post-fertilization effects? Is it not disingenuous to argue that, if a pregnant COC-user, under the perhaps prolonged influence of synthetic estrogenic and progestational steroids and their post-fertilization effects, experiences any early embryo loss, it will only be the result of spontaneous abortions and at the same rate as that of a pregnant woman not on the OCP? Again, where is the evidence to support this argument?

While data demonstrate that women who experience a clinically recognized pregnancy while on the OCP experience subsequent spontaneous abortions at rates similar to those of women not on the Pill, to argue this way in reference to unrecognized pregnancies cannot be substantiated. As Stanford and Larimore point out, ". . . available evidence suggests that the mechanisms of early establishment and maintenance of pregnancy and later maintenance of pregnancy are qualitatively and substantially different."[23]

Third, it has been shown that even if the endometrium is in a less receptive state when the human embryo reaches it, the embryo could still implant (and

obviously does sometimes implant as evidenced in women who get pregnant on the pill). In humans (in contrast to some animals) there are several days—a window of days—when the embryo could successfully implant, including a time before and after the optimal time for implantation. As Leon Speroff argues, the use of drugs that, speculatively, could provide contraceptive efficacy by accelerating tubal transport of the embryo would be "of doubtful value in the human because perfect synchrony is not required."[24] In other words, the arrival of the human embryo to the implantation site and an optimally receptive state of the endometrium need not be synchronous and, as a result, accelerating the embryo's transport through the tube would not contribute to the COC's efficacy due to the flexible window of implantation in humans.

Response: That some embryos do implant in the endometrium of women taking COCs is obvious from those women who get pregnant on the pill. But this says nothing about whether an embryo is more or less likely to implant in endometrium that has been decidualized and atrophied from the COC compared to implantation in normal endometrium in a woman not taking COCs. The Chowdhury et al. study (cited above) showed that, in women who ovulated secondary to missing two low-dose COCs, the lutenized endometrium was found to be nonsecretory. Such evidence strongly suggests that fewer embryos will be likely to implant in this situation.

Fourth, Goodnough insists that integrin studies showing an appreciable decrease of integrin expression in the endometrium of OCP-users are relevant to the question of the anti-implantation possibility of the pill only if the data originate from ovulatory cycles on the pill.

Response: Somkuti et al. report "significant alterations in cycle-dependent integrin expression" in the endometrium of OCP-users, but they do not specify whether the women tested are in ovulatory or non-ovulatory cycles on the pill.[25] But if, for argument's sake, one concedes that decreased integrin expression only occurs during anovulatory cycles on the pill, how reasonable is it to claim that a COC-user who conceives during an ovulatory cycle will move from a grossly altered level of integrin expression to one that is normal in such a brief period of time? Certainly, there are no data to support such a complete recovery within one follicular phase. Furthermore, would Somkuti et al. have concluded that this diminishment of integrin expression contributed to the pill's efficacy, that is, prevention of a clinically recognized pregnancy, if they were not referring to integrin expression during ovulatory cycles on the combined OCP?

C) The Incidence of Ectopic Pregnancy: Goodnough points out that one of the benefits of OCP-use is "less chance of ectopic pregnancy."[26] He points out that certain studies[27,28] demonstrate an increased risk of ectopic pregnancy on the OCP for several reasons. For one, they include POP-users along with COC-users. Since the POP slows down the transport of the embryo, it would naturally lead to higher incidence of tubal pregnancies. If a study consisted of COC-users only, Goodnough argues, the results would vindicate his claim that the COC protects against ectopic pregnancy at least as well as it prevents uterine pregnancy.

Response: Stanford and Larimore point to two large studies[29,30] whose participants are COC-users only, one conducted in seven maternity hospitals in Paris, France, the other in three Swedish hospitals. Collectively these

investigations, involving 484 women with ectopic pregnancies and 289 pregnant controls, suggest that "at least some protection against intrauterine pregnancy is provided via postfertilization effects,"[31] namely, via ectopic pregnancy.

Since risk of ectopic pregnancy also involves varying degrees of health risk for the women involved, it is important, from the perspective of obtaining adequate informed consent and respecting individual beliefs, to determine, as accurately as possible, the OC's absolute risk of causing extrauterine pregnancy. Adapting the model of Franks et al.,[32] and assuming an odds ratio (relative risk) for an extrauterine pregnancy for a OCP-user of 1.1 to 13.9, Stanford and Larimore predict that a woman on the COC has an absolute risk of an ectopic pregnancy due to postfertilization effects "ranging from 0.7 . . . to 19.9 . . . per 1000 women-years."[33] For POP users, presuming an odds ratio for an extrauterine pregnancy of 79.1, one could predict an "absolute risk of 4 to 99 ectopic pregnancies per 1000 woman-years."[34]

D) The Definition of the OCP: Goodnough states, "[b]y design, by intent, and by primary function, the OCP, when properly used, is in essence a contraceptive. The fact that it may fail to act as it was designed does not change its essence."[35] And " . . . a medication that is used to prevent conception is not an abortifacient even if it sometimes causes abortion."[36] The way physicians can "render the risk to the embryo tolerable"[37] and morally justify the prescription of the OCP is to encourage its responsible use and, on the part of the physician, to prescribe it continuously rather than cyclically, eliminating the pill free interval.

Response: Goodnough defines the combined OCP in the literal, more narrow sense of that which is *contra* or *against* conception. In this view, the practice of contraception is conception control, not birth control. But in defining the OC narrowly, Goodnough sets himself outside the more comprehensive, mainstream definition of the OCP—prevention of a clinically recognized pregnancy—assigned to it by users, designers/researchers and physician-prescribers.

If queried, users would probably not define the OCP as a pharmacological drug that prevents them from ovulating, but as one that prevents them from getting pregnant. N. Van der Vange addresses this point in his study of ovarian activity with the use of selected low dose COCs:

> Pearl-Index data, claimed by the manufacturers of these low-dose preparations, indicate that protection against pregnancy is indeed maintained. The present study may introduce some doubts about these figures (his study found a relatively large number of ovulatory cycles with the low-dose COC: triphasic LNG [30 mcgs EE; 50 mcgs levonorgestrel]). *However, the mode of action of these OCs is not only based on ovulation inhibition, but other factors are involved such as cervical mucus, vaginal pH and composition of endometrium* (italics mine).[38]

The action of accessory contraceptive mechanisms just alluded to gives credence to the definitional accuracy of the vernacular term, the "birth control pill," when referring to the OC. Women who take the pill for family planning purposes do so to avoid getting pregnant. Abortion statistics substantiate that fact by revealing that half of the women who have an abortion were on the pill when they got pregnant.[39] In other words, when the OCP fails to do what it is intended to do and what it is designed to do, namely, prevent a clinically recognized pregnancy, many women "rectify" the contraceptive failure with abortion.

Standard texts describing the mechanism of the COC and professional inserts written by pharmaceutical designers that accompany the pills corroborate this populist definition. The COC acts both to suppress ovulation and to prevent uterine implantation. Its dual end is realized not only by the primary estrogenic mechanism of anovulation but by its secondary progestational mechanisms that, besides preventing the surge-like release of LH necessary for ovulation, also prevent sperm transport to the uterus, alter fluid secretion and peristalsis of the fallopian tubes, and alter the uterine endometrium in a way that makes implantation of the early embryo less likely. When the contraceptive nature or essence of the pill is defined in this broader, more comprehensive sense, it is clear that the way the OCP is designed to act—in a pre-fertilization *and* post-fertilization manner—corresponds exactly to the commonplace definition of the OCP's essential nature: the prevention of a clinically recognized pregnancy or the control of birth.

Part Two: Is Prescription of the COC Morally Justified by the Principle of Double Effect?

Because of its implications for moral analysis, Goodnough is right to home in on the correct definition of the COC. First, by defining its design and intent as the suppression of ovulation, he suggests that the moral object of the action of prescribing the COC—precisely what the physician is intending in that action—is a morally good one and one that could be done for a good motive. What the physician is doing, i.e., what he intends, is the suppression of ovulation (its *content*) chosen under the guise of the good (its *form*). In short, according to Goodnough's analysis, to offer the COC-user temporary, reversible infertility is a good thing and, therefore, the *moral object* of the act of prescribing the hormonal contraceptive is a good one. Second, defining the essence of the COC as suppression of ovulation, Goodnough also implies that the principal *motive* of the physician for prescribing it, to prevent conception, is also morally good. The physician intends the act's foreseen good effects (prevention of conception) and only permits or accepts its foreseen but unintended evil effects (prevention of implantation).

Third, it is impossible, from a moral perspective, to define what it is that one wills or intends in the action of prescribing the oral contraceptive unless and until one understands the pill's intended effects versus its unintended side effects. If, as Goodnough argues, the COC is essentially defined as an anovulant, that is, that its principle effect is to prevent conception by suppressing ovulation, then what he or any other physician intends (*in se intentum*) by prescribing the combined OCP is the good of the suppression of ovulation. However, Goodnough considers the COC's side effects, like that of the risk of death of the early embryo in the event of breakthrough ovulation and fertilization, lie outside the intention (*praeter intentionem*) of the physician. By not intending but only accepting the foreseen evil side effect of a possible abortion, Goodnough appears to be arguing that the physician is fulfilling his duty to avoid those evil effects as far as possible.

Fourth, understanding the "nature" of the COC alerts the physician to the morally ambiguous nature of the act of prescribing it. Goodnough defines the COC as a medication that, in essence, prevents conception, but one that also has the potential for failure that could result in the death of the early embryo. Hence,

a physician-prescriber is able to foresee that the action of prescribing the COC has both beneficial (morally good) and harmful (morally bad) effects: the foreseen good effects—the prevention of conception and other health benefits, and the foreseen bad effect—the risk of the loss of early embryonic human life. Whether prescription of the pill is a morally good thing to do—in the presence of this morally evil effect—is the question that the principle of double effect can help to answer.

Given Goodnough's definition of the COC and its implications for the way he would define the moral object of and motive for the action of prescribing it, the following is a suggested specification of his employment of the principle of double effect:

1) The intended object of the act of prescribing the COC—the suppression of ovulation—is a morally good one, i.e., it facilitates the patient's family planning goals, facilitates genuine gynecological health and, therefore, contributes to human fulfillment of the COC-user.

2) The motive of the prescribing physician—to prevent conception of a new human being—is a morally good one (i.e., it advances human fulfillment since it conforms with the woman's plans to, say, avoid unplanned pregnancies). The physician's motive is to will the foreseen good effect while only permitting or accepting the foreseen (but rarely occurring) evil effect (risk of the death of the early embryo).

3) The foreseen good effect of the action—the suppression of conception along with other health benefits—is realized not by means of the foreseen action's bad effect—the possibility of the death of the early embryo, but by means of the introduction of synthetic sex steroids that alter events of the ovulatory and menstrual cycle. [In other words, the death of the embryo is not the means to the suppression of ovulation; the action of the synthetic sex steroids is.]

4) The foreseen good effects of the action—an effective, convenient, and safe method of conception control and a host of health benefits—are equal to or greater than the foreseen but rare occurrence of the death of an embryo.

5) The physician has no other effective means than the use of COCs to realize the ends of conception control and other pill-specific health benefits.

Response: As I outlined above, Goodnough defines the COC in a literal, narrow manner that fails to encompass its broader, more comprehensive mechanisms of action and essence, viz., the prevention of a clinically recognized pregnancy. With an inaccurate understanding of the essential nature of the COC in place, his definition of the moral object of the act of prescribing the OC will also necessarily be faulty. Objectively speaking, then, what the physician-prescriber intends in the act of prescribing the COC is the prevention of a clinically recognized pregnancy. And directly willing the prevention of a clinically recognized pregnancy means that the physician wills that the pill achieve that end through its primary and secondary mechanisms of action, i.e., through both its pre- and post-fertilization effects.

Understood correctly, then, the moral object of the act of prescribing the COC

is evil, not good. It is critical to this discussion to note that directly intending to prevent a clinically recognized pregnancy by the prescription of the COC is illicit based on two distinct immoral acts, risk of abortion and suppression of fertility. First, one ought never to prescribe a medication that could directly risk causing the death of another human being, and second, one ought never prescribe a medication that works against the good of the patient by suppressing rather than promoting, specifically, the human procreative good and, by extension, overall physical and psycho-somatic health and human fulfillment.

Of course, if the act of prescribing the COC is immoral by virtue of its directly intended object (even if you define it, as Goodnough does, as suppression of ovulation only), one cannot proceed to the subsequent conditions of the principle of double effect without incurring moral inconsistencies. Referencing my previous construction of Goodnough's appeal to the principle of double effect, and presuming for illustrative purposes that the directly intended object of the act is suppression of ovulation only, these contradictions would include the following:

1) The object of the act of prescribing the COC, suppression of ovulation, is described as moral when it is immoral;

2) The motive for the act, the control of conception, could be morally acceptable given the presence of psychological, financial, and health reasons justifying the spacing of children. (Keep in mind, however, that a morally upright motive will not transform an action that is immoral by virtue of its moral object into a morally good act);

3) The foreseen effect of the act—conception control—is evil not good, and it is sometimes realized by the evil means of post-fertilization effects;

4) The "good" effect of conception control cannot be equal to or greater than the evil effect of birth control since both effects—the anovulant and abortifacient—are evil; and

5) The prescription of the OCP is not the only means of obtaining the end of effective conception control; there is another means to avoiding conception that is moral since it accords with the good of the human beings involved, both providers and users, and it brings with its own set of other health benefits.

Summary Response: Based on these contradictions, my objections to Goodnough's use of the principle of double effect (PDE) are threefold. First, in his description of the requisites for the correct application of the PDE, Goodnough opts to make explicit in his fifth criterion what is typically unexpressed but always presupposed by the principle, namely, that "there must be no other way of producing the good effect." Since this criterion is central to adjudicate legitimate appeal to the principle, it is appropriate to state it upfront. It immediately restricts invocation of the PDE to cases where the good goal of the agent can be achieved only through a morally mixed means, that is, through an action that realizes both good and bad effects. In other words, if, in the case under consideration, there would be an effective way to suppress ovulation or to avoid pregnancy that does not bring with it the evil of an abortifacient effect, one

would be obligated to choose that option rather than the OC.

Laboring under the aegis of that requisite, I maintain that Goodnough inappropriately invokes the PDE to justify the prescription of the OC, since there is an alternative, that is, *an effective medical and moral means* of avoiding pregnancy. Evidence of the medical efficacy of a natural method of family planning, a meta-analysis of the Creighton Model NaProEducation Technology (five studies involving 1,876 couples), reveals that, when this system of natural procreation education is used to avoid a pregnancy, its method effectiveness at the 12th ordinal month is 99.5% and its use effectiveness is 96.8%; at the 18th ordinal month, its method and use effectiveness is 99.5% and 96.4% respectively. These statistics compare favorably with the efficacy of the OC.[40]

Although a moral comparison/contrast between the use of a natural method and the OCP for family planning purposes would entail a discrete article, the following is sufficient here. Only natural methods of family planning afford a method of avoiding pregnancy that does not bring with it the risk of the induced death of the early embryo (a moral ambiguity associated with OCs that Goodnough recognizes and about which he has moral reservations). Further, when a couple avoids the conception of a new human being by respecting the natural rhythms of their fertility, they choose a means to their end that conforms exactly to a comprehensive understanding of human nature and the procreative/personal aspect of human fertility.[41] As Leon Kass warns, the principal norm against which we need to adjudicate any sort of reproductive technology, including "The Pill," is whether it constitutes a fulfillment rather than a "defilement of *our given nature as procreative beings*, . . ." (italics mine).[42] The reality is that only with natural methods of family planning (as opposed to steroidal hormonal methods) is a couple able to promote the truth of their procreative nature, the truth of marriage as a community of love and life, and the truth of their marital intercourse as acts that are at once life- and love-giving.

Second, even if for argument's sake we concede, from one side, that one can legitimately invoke the PDE in respect to the prescription of the OC and, from the other, that the abortifacient effect of the OC is an unintended side effect, the nature of the evil effect of the act, i.e., the death of an early embryo, would not be outweighed by the good effects of a convenient method of family planning and of ancillary health benefits. Or stated another way, the good effects of convenient family planning and possible health benefits are not of a sufficient moral value to justify the bad effect of risking the death of an embryonic human being. There is a clear disproportionality between the good and bad effects of the act of prescribing the OC and, as a result, Goodnough's argument fails to fulfill the proportionality requisite of the PDE.

Third, in assessing the moral object of the action of prescribing the OC, and, again, conceding for argument's sake that the "what" of the action is suppression of ovulation as Goodnough defines it, it is necessary to analyze the moral nature of the kind of act that suppresses ovulation. One cannot describe the suppression of ovulation as a good unless one views fertility and the normally functioning reproductive system as some sort of pathology. But, in what sense are a woman's natural menstrual and ovulatory cycles a disease? Should not working cooperatively with a woman's reproductive system so that it can function optimally be a premiere goal of gynecological medicine?[43] And, if this analysis

stands, the prescription of the OC, even when judged primarily from a medicinal rather than from a moral perspective, is not a good human act. That is, prescribing the OC is not in the best health interests (physical and moral) of the patient, nor is it, by logical extension, in the best professional interests of the health professionals who is bound to promote the integral good of every patient. E&M

References

1 This discussion of the question of the abortifacient character of the oral contraceptive focuses on the perfect use of the "low-dose combined" oral contraceptives, i.e., those containing 30 or 35 micrograms (mcgs) of ethinyl estradiol [EE]). It does so because, first, most women using hormonal contraception are on this form of "the pill." Second, there appears to be more substantive agreement that the other contraceptive formulations may have greater risks of incurring breakthrough ovulation, ectopic pregnancy, or hostile effects on the endometrium and, therefore, may have greater risks than the "low-dose combined" pill (COC) for post-fertilization effects. The other contraceptive formulations that are referred to in contrast to the COC include: the lower dose combined pill (20 or 30 mcgs of EE); progesterone only pill (no estrogenic component); emergency contraceptives (2 doses:120-200 mcgs of EE or no EE but 1.5 mg levonorgestrel); injectable contraceptives such as DePo Provera (no estrogenic component) and imperfect use of any kind of hormonal contraceptive.

2 In *Ethics and Medicine*, for example, numerous articles and responses were dedicated to this question: J Wilks. "The Impact of the Pill on Implantation Factors—New Research Findings." 2000;16.1; WL Larimore. "The Abortifacient Effect of the Birth Control Pill and the Principle of 'Double Effect'." 2000;16.1; Joel Goodnough's article cited in the body of this article and in a footnote below; J Wilks. "Response to Joel E. Goodnough MD, 'Redux: Is the Oral Contraceptive Pill an Abortifacient?'" 2001;17.2; and in exchanges between William F. Colliton and Joel E. Goodnough, 2001;17.2 and between Joseph B. Stanford/Walter L. Larimore and Joel E. Goodnough, 2001;17.3.

3 Representative articles: WL Larimore and JB Stanford. "Postfertilization Effects of Oral Contraceptives and Their Relationship to Informed Consent" *Arch Fam Med.* 2000;9:126-133; SA Crockett, D Harrison, J DeCook, C Hersh. "Hormone Contraceptives: Controversies and Clarifications." In JF Kilner, PC Cunningham, WD Hager eds. *The Reproductive Revolution: A Christian Appraisal of Reproductive Technologies, Sexuality and the Family.* (Eerdmans, Grand Rapids, MI) 2000; WL Larimore, R Alcorn. "Using the Birth Control Pill is Ethically Unacceptable." In JF Kilner, PC Cunningham, WD Hager eds. *The Reproductive Revolution: A Christian Appraisal of Reproductive Technologies, Sexuality and the Family* (Eerdmans, Grand Rapids, MI) 2000.

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Vol 18:2, Summer 2002

A Defense of the Neglected Rhetorical Strategy (NRS)

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Philosophical criticism serves a valuable end when it helps to clarify the truth. But clarity requires precision. Precision is especially necessary when one presents the arguments of those holding the view which is the focus of one's criticisms. Where there is lack of precision, ambiguity and confusion may arise, which in turn obscure the truth. For this reason I was deeply disturbed by the inaccurate portrayal of my work and arguments (and the parallel arguments of Frederica Mathewes-Green and Paul Swope) in a recently published article by Francis Beckwith.[1]

Beckwith begins with a description of the traditional pro-life strategy, for which he has been an advocate,[2] that is centered on the moral argument against the unjust killing of innocent humans beings. Beckwith's argument is simple: since abortion destroys an innocent human life, abortion should be prohibited. I do not contest it. Beckwith, on the other hand, does object to the reasoning and arguments of Mathewes-Green, Swope, and myself, who also seek to identify women as victims of abortion, an approach he has labeled the "new rhetorical strategy (NRS)." The novel acronym NRS is less descriptive than the pro-woman/pro-life label I prefer, but for the purpose of responding to Beckwith's criticisms I will employ it in this rejoinder.

A False Dichotomy and a Narrow Vision

The stated purpose of Beckwith's paper is to demonstrate that NRS is based on poor reasoning, relies on weak findings of social science, and inadvertently advances moral relativism. His goal is to expose the failure of NRS to provide "an adequate ground on which to base the pro-life cause" and thereby to protect the primacy of the traditional pro-life argument from being undermined by this pretender. To this end, Beckwith declares the scope of his paper to be a critique of "the veracity of premises, the validity of inferences as well as the coherence of conceptional claims of proponents of NRS."

Unfortunately, Beckwith misstates our premises right out of the gate, claiming:

> They maintain that the humanity of the fetus and the immorality of abortion are not really in dispute among a vast majority of the American populace . . . [therefore] the pro-life movement should stress the alleged harm abortion does to women, and for that reason, offer to meet the material and spiritual needs of the pregnant woman who sees abortion as an evil, though necessary, alternative. This shift, proponents believe, will result not only in making abortion rare, but also in making American culture more pro-life . . . My concern in this essay is with those activists who suggest that such works replace, rather than merely supplement, moral argument and ethical justification.

This summary of our views is incorrect on several counts, but the most egregious flaw is the claim that any NRS advocate is suggesting that our approach should "replace, rather than merely supplement" the moral argument against

Ethics & Medicine, 18:2 (2002):23-32.

abortion as the unjust killing of a human life. I know of no one who supports NRS who has ever suggested that an emphasis on the harm abortion does to women should in any way replace the moral argument against abortion. We have simply argued that the emphasis on the objective morality of abortion should not eclipse discussion of the real tragedy abortion inflicts on women, men, and their families. Our position is that there is more than one valid argument against abortion, and anti-abortion efforts will be less effective or even ineffective if they focus *only* on building the case for the moral argument, which appears to be Beckwith's preference.

What we are calling for is the real and rhetorical practice of advocating for *both* the woman and her unborn child. I've argued at length elsewhere, and indeed in the very book Beckwith criticizes, that it is a false dichotomy to suggest that society must choose between either the woman or her child.[3] When pro-lifers, such as Beckwith, argue solely from the principle of objective morality, they give the impression that arguments on behalf of the unborn child's right to life trump all concerns for the woman—end of discussion. For those who do not buy that argument, the unintended effect is to reinforce the view that anti-abortionists are choosing for the human fetus at the expense of women. For some, this may produce a reaction: "If you are going to ignore the woman for the sake of the fetus, why shouldn't I ignore the fetus and choose to support the woman?" To the degree that Beckwith seeks to create an argument for a polarization between the traditional pro-life argument and the pro-woman/pro-life argument, he is reinforcing this false dichotomy. By ignoring NRS advocates's support for a parallel line of traditional pro-life arguments, Beckwith is creating a fictional challenge to the traditional pro-life strategy. Since it is evident in the full context of all the NRS sources he cites that all of us would support efforts to emphasize concern for *both* the unborn child and her mother, and all of us would agree with the moral reasoning underlying the traditional pro-life strategy, one can only conclude that Beckwith is wrestling with a strawman of his own creation.

The failure of the traditional pro-life strategy is not in its moral reasoning. No NRS advocate has ever suggested that this is the problem. Our argument is simply that pro-life efforts will be more effective to the degree that we succeed in presenting a moral vision that consistently demonstrates just as much concern for women as for their unborn children. Discussion of the harm abortion does to women and programs to promote post-abortion healing for women who have suffered that harm, do not replace advocacy for the rights of unborn children. They simply broaden the base of arguments against abortion.

It is the view of many NRS advocates that anti-abortionists will only be successful in stopping abortion when we truly become both pro-woman and pro-life. No one has ever won a marathon breathing with one lung. Similarly, I argue that the anti-abortion movement will never win its race against abortion until it breathes with two lungs—one for the unborn and one for women. Furthermore, advocacy for women should not arise only when women are faced with problem pregnancies, nor should it end when they have had abortions. Our advocacy for women must be consistent and unconditional both for those who are facing crisis pregnancies and for those who have had abortions.

As an advocate of the pro-woman/pro-life strategy, I have heard others like Beckwith accuse me of "abandoning the unborn child" (these are not Beckwith's words, but the words of another critic) in preference for their mothers. This is simply not true. Broadening of our focus does not require us to "replace"

(Beckwith's words) moral arguments on behalf of the child with pragmatic arguments ("it increases depression,[4] substance abuse,[5] and suicide rates[6]") on behalf of protecting women from abortion. Arguments on behalf of *both* the woman and child can and must coexist.

The argument that abortion hurts women is not new. It has been raised as an issue since even before *Roe v. Wade*. But NRS advocates would argue that this aspect of the anti-abortion argument has been seriously neglected by some pro-life advocates, like Beckwith, who prefer to hang their hat on the simple argument for objective morality: abortion involves the deliberate killing of an innocent human life; it is wrong and should be banned—period. As repeatedly stated, I do not dispute that analysis. But I do question whether or not it can ever carry the day in a fallen world where many people are more likely to be guided in their choices by pragmatism than by objective morality.

The NRS argument, then, is not so much for a "new rhetorical strategy" as it is for a "neglected rhetorical strategy." We are not arguing to replace concern for the unborn child with concern for women, but simply to stop neglecting the latter.

The harm abortion does to women is just as real as that done to the human fetus. From an objective moral sense, one could argue that the harm done to the woman is less since unlike the aborted child, she does not generally lose her life. Alternatively, one could argue that the harm the woman suffers is greater since her soul is damaged by abortion, while the child only suffers physical death and remains spiritually untouched. The latter would have been Aristotle's argument.[7]

Setting that disputable point aside, in the social and political realm it seems evident that for many people the harm abortion causes to unborn children is seen as remote, since they never see the aborted child. By contrast, they do see, know, and have relationships with women in their everyday lives. Therefore, as this segment of society comes to understand how abortion hurts women, this knowledge may seem more "real" to them than evidence regarding the harm abortion does to unborn children.

I would argue that information about how abortion harms women is one of the best ways of re-engaging the interest of the majority of Americans who tolerate abortion but mostly just do not want to think about it. One of the reasons they do not want to think about it is precisely *because* of their moral ambivalence. On a fundamental level they know it is wrong, but they have decided it is not a *serious* moral wrong because they believe it helps women. Many refuse to accept objective moral arguments against abortion simply because they refuse to give up the option of gaining presumed benefits that might be gained from the "necessary evil" of abortion. By helping this ambivalent majority to see that abortion hurts women, we call into question their moral thinking. If abortion does not help women, what good comes from it? By engaging them at the point on which they excuse abortion (the view that abortion helps women) we call them to reconsider their whole flawed analysis.

When pro-life advocates set aside their own egos and provide a platform for post-abortive women to say, "My baby died in that abortion," a social connection is made to the grief of the post-abortive woman and her child which is a more powerful and real political argument than "an unborn baby's heart begins to beat three weeks after conception." Both are true, but the advocacy on behalf of women, both before and after they have had abortions, is a more effective bridge to the hearts of the ambivalent majority.

Abortion as a Serious Moral Wrong

Beckwith says that "NRS supporters seem to be saying that the only way to persuade the general public that abortion is a serious moral wrong is for the pro-life movement to show that many women suffer. . . ." As with many of his summaries of our positions, Beckwith does us the disservice of criticizing what we "seem to be saying" rather than what we are actually saying.

The goal of NRS is to (1) help women avoid the mistake of choosing abortion and (2) help those who have already chosen abortion discover emotional healing and spiritual conversion. In other words, we seek to both save lives and save souls. We do not claim that our approach will save all lives or all souls, but simply that it is effective in saving some lives and some souls that would not otherwise be saved. Education about the physical, psychological, and spiritual harm abortion causes is a key aspect of this work.

Beckwith's goal of convincing the public that abortion is a "serious moral wrong," while laudable, is a separate goal. It involves larger questions of objective truth and spiritual realities that are pursued by preachers and philosophers but which are never fully achieved in our flawed societies. To criticize our pro-woman/pro-life strategy for being unable to achieve what four thousand years of religion and philosophy have been unable to achieve is rather unfair.

I have and will argue that educating the public about abortion-related injuries may make it easier for some (especially those whose view of ethics is limited by their own pragmatic concerns) to conclude that abortion is a "serious moral wrong." But neither I, nor, I suspect, any NRS advocate, would ever argue that information about the risks of abortion is *sufficient* for achieving that end, or should even be the *basis* for such a moral conclusion. As will be elaborated upon later, I do not base my arguments on the belief that abortion is evil because it harms women. But I do argue that because abortion is evil, we can expect, and even know, that it will harm those who participate in it. Nothing good comes from evil.

Beckwith has turned the NRS argument that information about abortion risks will make it *easier* for many people to adopt a pro-life perspective into a claim that such information *will* make people more pro-life. This revised claim is easily criticized, as Beckwith demonstrates, but since it is not the claim of NRS proponents he is tilting at a windmill of his own creation.

My own views on this are well documented.[8] For the purpose of passing restrictive laws to protect women from unwanted and/or dangerous abortions, it does not matter if people have a pro-life view. The ambivalent majority of people who are willing to tolerate abortion in "some cases" are very likely to support informed consent legislation and abortion clinic regulations, for example, because these proposals are consistent with their desire to protect women. In some cases, it is unnecessary to convince people of abortion's dangers. It is sufficient simply to raise enough doubts about abortion that they will refuse actively to oppose the proposed anti-abortion initiative. In other words, if we can convince many of those who do not see abortion to be a "serious moral evil" to support the anti-abortion initiative that protects women and reduces abortion rates, that is a sufficiently good end to justify NRS efforts. Converting these people to a pro-life view, where they respect life rather than simply fear abortion, is a second step. The latter is another good goal, but it is not necessary to the accomplishment of other good goals, such as the passage of laws that protect women from dangerous abortions and thereby dramatically reduce abortion rates.

Unfortunately, Beckwith does not engage my arguments. Instead, he latches onto an article by Paul Swope which was constructed to promote the Caring Foundation's pro-life advertising campaigns.[9] Beckwith goes to great lengths to criticize Swope's interpretation of the Caring Foundation's research which reveals a shift in public opinion in a "pro-life direction" among those who have seen the ads. Beckwith argues that since the Caring Foundation ads do not emphasize the moral arguments against abortion, the results of their survey may not actually be measuring a true advance in the belief that abortion is objectively a serious moral evil. Instead, those who are shifting their opinions against abortion may be doing so simply because they have a lower preference for it, but would still accept it in certain circumstances. It is on the basis of this criticism that Beckwith asserts that NRS supporters "hastily interpret the public's 'moral' condemnation of abortion as consistent with objective morality and a pro-life view of the fetus."

While all of the above involves one of Beckwith's longest criticisms, I believe that his argument is fundamentally flawed in that he is applying a different definition to Swope's use of the term "pro-life" than Swope intended. To Beckwith, to be pro-life means to have a moral belief in the absolute right to life of all human beings. By contrast, Swope's article was built around surveys and promotional literature intended to sway pro-lifers to donate to the Caring Foundation's advertising campaign. To that end, Swope used terminology that equates any movement away from support for abortion to a movement in favor of "pro-life sentiment." There are obviously many shades of difference between reservations about abortion and solid conviction of pro-life principles, and it is these shades of difference which Beckwith exploits to criticize Swope's generalizations about the success of their television ads. But this criticism, I believe, involves a parsing of word choices that is fundamentally unfair. I sincerely doubt Swope ever expected his comments to be subjected to linguistic and philosophical tests for accuracy. Swope was simply trying to praise a program to a pro-life audience using the terminology that most resonates with those who prefer to see their goals described as pro-life rather than anti-abortion.

While the Caring Foundation ads may cause some people to be more pro-life, it is certain that a large part of the measured effect is simply that some people become less favorably disposed toward abortion, even if they do not become "pro-life" as Beckwith would define it. If Swope had known that his statements would be used to accuse him of "hastily interpreting" the data, I suspect he would have agreed that it is more accurate to say public opinion moved into a more "anti-abortion direction." Such a simple change of terminology would have erased nearly two pages of Beckwith's criticisms.

A more serious problem is that Beckwith turns the strategy of the Caring Foundation on its head to suggest that their efforts may actually engender a more narcissistic society. Swope explains that one of the keys to dissuading women from having abortions is to help them see how abortion is not in their self-interest. Beckwith latches onto this to charge that:

> given his emphasis on self-interest, Swope has no principled argument against that sort of abortion [in a woman's self-interest]. Nurturing an apparently unprincipled self-interested populace does not seem consistent with what pro-life activists would conceive as a pro-life culture, even if it results in fewer abortions . . . it seems counter-intuitive for the defenders of NRS to want to provide a cultural environment hospitable to the moral primacy of self-interest.

If one seriously adopts Beckwith's perspective, one should no longer simply tell

children not to run into the street because they might get hurt. Such irresponsible advice would merely nurture the unprincipled, self-interested attitudes of children who think that their own well-being is more important than the right of way and property rights of drivers. The accusation that NRS proponents "want" to promote "the moral primacy of self-interest" is equally ludicrous.

As will be discussed at greater length below, appeals to self-interest do not necessitate an abandonment of the fundamental moral argument against abortion. Indeed, Beckwith ignores one of the principle arguments NRS advocates make, which is simply this: a moral judgment against abortion is written in every woman's heart. This moral judgment can be buried by rationalizations and self-interest. NRS efforts which demonstrate that abortion is not in a woman's self-interest will help to remove some of the clutter which obscures the moral judgment that God has written on her heart. Appeals to self-interest based on arguments about how abortion will harm a woman's life serve to cancel out the perceived potential benefits of abortion. As the clutter is removed, a woman's moral ambivalence comes into clearer relief. As the imagined benefits of abortion become less certain, it becomes increasingly likely that the fundamental moral question of whether it is right or wrong to have an abortion will be honestly entertained.

Telling women the truth is never wrong. It is not wrong to tell them about the humanity of their unborn children. It is not wrong to tell them about the philosophical and moral arguments against abortion. Neither is it wrong (despite Beckwith's misgivings) to tell them that abortion is not a safety net. It is a safety hazard.

NRS advocates argue that educating women about the risks of abortion does not distract them from the serious moral issue they face. Instead, puncturing the illusion that abortion will keep their lives from changing, very likely for the worst, helps them to think more deeply about everything abortion means. If the perceived good is offset by a realistic view of how abortion will not solve their problems, but may in fact create new problems, women are more likely to engage the question of what they *ought* to do. As long as abortion appears to be a quick-fix or easy way out, many women never struggle with that deeply moral question, "What is the right thing to do?" No NRS advocate suggests that women should be shielded from this question. We simply insist that some women will refuse even to consider this question, or may refuse to follow their own answer to this question, because they are under tremendous pressure to have an abortion, which everyone says is their "best solution" or even their "only choice." By reducing the pressure to act against their consciences, we help women to listen to their consciences.

Best Interests Versus Self-Interests

Beckwith's concern about NRS advocates promoting a narcissistic worldview leads him to a confusion about the distinction between the self-interests of women and the best interests of women. In footnote 30, Beckwith states that I use the two terms interchangeably. That simply is not true. A word search of my book reveals that the phrase "self interests" is used in only one sentence.[10] This occurs after a discussion of what is in the "best interests" of women in an objective sense.[11] In the context of the entire chapter, I had thought that the distinction would be clear to most readers. Apparently, I was mistaken. To clarify it for the sake of responding to Beckwith's critique and to further my criticism of his own analysis, I'll be clearer here.

I use the term "self-interest" to describe the purely subjective desires and interests of an individual, which are naturally limited by that person's perspective. What is in the person's "best interests," by contrast, is objective and includes a perspective and information that lies outside the limits of that person. For example, a child may pursue his *self-interest* by seeking to play with a snake. A parent who pulls the child away from the snake because the parent recognizes it is poisonous pursues the *best interests* of the child, despite the child's anger and frustration at being denied his own wishes.

Clearly, what is in a person's best interests may often be in conflict with what is in his or her self-interest. Most adults recognize in our pasts decisions which, at the time, were made to further our self-interests, but in the long run are recognized as harmful to our best interests. If we were omniscient, our self-interests and our best interests would always be synchronous. In practice, they are frequently in conflict. God's moral laws, either revealed or written in nature or on our hearts, are simply God's way of trying to share His omniscience with us so that we can choose that which is in our best interests. Whenever we follow a self-interest that is contrary to the moral truth (which leads to fulfillment of our best interests) we are foolish. All violations of morality, from an omniscient perspective, are acts of pure foolishness. When we see that an option is foolish—not in our best interests—we are far less likely to choose it. When we are confused, frightened, and ignorant—as most women considering abortion are—it is easy to make a foolish choice.

Given these definitions, it should be evident that while I believe a woman may seek an abortion to satisfy her self-interest, it is never in her best interest. Even if there were no physical or psychological problems associated with abortion, it still would not be in her best spiritual interests. To paraphrase Jesus, "What does it gain a woman to win the whole world but lose her soul?" Furthermore, I would argue that the evidence of physical and psychological harm from abortion actually supports this claim of spiritual harm. Following is my argument to this effect that Beckwith apparently found confusing.

> Believers know that God's moral law is given to us not to enslave us, or even to take the fun out of life. It is given to us as a path toward true happiness. Christians rightly anticipate, then, that any advantage gained through violation of the moral law is always temporary; it will invariably be supplanted by alienation and suffering.
>
> This insight gives us an alternative way of evangelizing. Whenever we cannot convince others to acknowledge a moral truth for the love of God, our second-best option is to appeal to their self-interest. If an act is indeed against God's moral law, it will be found to be injurious to our happiness. Thus, if our faith is true, we would expect to find compelling evidence which demonstrates that such acts as abortion, fornication, and pornography lead, in the end, not to happiness and freedom, but to sorrow and enslavement. By finding this evidence, and sharing it with others, we bear witness to the protective good of God's law in a way which even unbelievers must respect.
>
> Research and education about the dangers of abortion, then, are not just grist for political reform. They are also leaven for spiritual reform. As people become more aware of all the hardships abortion causes to women, men, siblings and society, they will begin to respect the wisdom of God's law. They will begin to think: "Maybe all these religious folk weren't so crazy after all. If they were right about this, when every other power in society said they were wrong, maybe they're right about other things, too."

Part of the goal of pro-lifers, I would argue, is to help women see that their self-interests *are* served by choosing life rather than abortion. This is often not readily apparent, but we should never presume, as the pro-life Beckwith does, that "many abortions do not result in gratuitous suffering or harm to the women who have them." In fact, Beckwith is conceding an unprovable claim. While it is clearly known that some women do have serious physical and psychological complications from abortion, the counterclaim that some women are not harmed by abortion can only be verified with respect to physical complications. In contrast, psychological complications of abortion may often be repressed for years or even decades. Furthermore, post-abortive women will often act out repressed grief through substance abuse, broken relationships, self-destructive behavior, and numerous other symptoms for decades without ever recognizing their abortion as an underlying cause.

Such delayed reactions preclude our ability to declare with certainty that any given woman will not suffer grief, regret, or other reactions at some later point in life, much less in the afterlife. No one can possibly claim to know with certainty that some or any particular women's lives have been benefited by abortion, since no one can know how their lives would have been if they had not had an abortion. Similarly, no one can know with certainty that some or any particular women's lives have not been hurt by having an abortion.

Conversely, while I cannot prove that all women who abort experience "gratuitous suffering or harm," it is not necessary to do so. That some women have is easily demonstrated. That *any* woman is known to suffer from physical or psychological injuries, is sufficient reason to educate the public about this risk, demand efforts to help protect women from these injuries, and provide post-abortion recovery programs for those who are suffering from these harms. My case is easy to make. By contrast, the pro-abortionists' task of proving that any woman, much less most, experience overall benefits from abortion cannot be accomplished because the future is unknowable.

A Perfect World Versus a Better World

In many respects, Beckwith's argument appears to arise from a desire to see the battle against abortion won on the highest of battle grounds, a place where all are converted to an allegiance to objective truth. He makes the analogy that the act of releasing a slave because doing so serves the slave-owner's economic interests is not morally equivalent to releasing a slave because the owner is "converted to the belief that no person by nature is property." In the same sense, Beckwith would prefer that a woman should choose against abortion not to avoid breast cancer but because she values the life of her unborn child.

Once again, I do not disagree with Beckwith. While it is a morally superior act to choose life for the love of life, the requirements of justice are *sufficiently* served if women choose against abortion because they do not want to face all the physical and psychological risks that it entails. While it would be better for a woman's boyfriend or parents not to coerce her into an unwanted abortion because they share with her a desire and love for her unborn child, it is *sufficient* for the sake of preserving her well-being and that of her child if they refrain from pushing for an abortion because they are fearful of how it may effect her alone. Moreover, Beckwith's analogy is weak since, unlike the release of a slave, the act of giving birth and raising an unplanned child provides many subsequent opportunities to be converted to a love of that child's life. The choice to give life, or at least to refrain from abortion, produces ongoing opportunities for conversion.

As Christians, Beckwith and I both desire to see the establishment of God's kingdom on earth. We both desire the conversion of all, including ourselves, to the point where all people would make all their decisions in accord with the highest moral principles. I cannot dispute this ideal anymore than I can dispute the argument that abortion is a serious moral wrong because it involves the destruction of an innocent human life.

But I would argue that it is self-defeating to use the yardstick of perfection to beat down every proposal that falls short of creating a perfect world. In a perfect world, no one would want to see pornography. In a simply better world, those who want to see pornography would be unable to find it. Similarly, in a perfect world, there would never be any abortions because all people would cherish and respect life. In a simply better world, those who are tempted to abort would not, if only out of fear of suffering physical or psychological injuries. To avoid sin for love of God is perfection; to avoid sin for fear of hell is, at the very least, a step in the right direction. I cannot criticize Beckwith's desire for a perfect world. At the same time, I do not see how he is helping to establish Christ's perfect kingdom on earth when he singles out for criticism pro-woman/pro-life efforts which can help to make our world better.

To mount a moral criticism of NRS tactics is not sufficient to demonstrate that these tactics fail to produce a perfect world where abortion is banned because all believe in the existence of absolute truths, objective morality, and the serious moral wrong of abortion. No strategy, not even the traditional pro-life strategy, can pass such a test. If Beckwith wants to create a compelling philosophical or moral case against the NRS approach, it would seem incumbent upon him to show that we are either recommending evil means to a good end, or at least neutral or ineffective means that produce no good results. He has not undertaken that task. Instead, he has simply created a false conflict between advocates of the two-legged pro-woman/pro-life strategy and those who have supported the one-legged pro-life strategy.

Conclusion

In the final analysis, Beckwith wrongly portrays the premises and goals of "NRS" advocates. His interest is in persuading the public that abortion is a serious moral wrong. Our interest is in helping women and society to turn away from believing abortion will solve their problems and to help women who have already had abortions find psychological and spiritual healing. He sees a bolt that needs to be removed, and he says the screwdriver we have produced will not get the job done. He is right, but only because he misunderstands the purpose of the tool.

Helping protect women from the injuries that result from abortion, and helping them after they have suffered those injuries, are moral obligations in and of themselves. Such advocacy on the part of women is a moral duty that is separate from, but not opposed to, the duty to protect innocent human life. NRS advocates have only argued that more emphasis on the first task may also make it easier to accomplish the second task. The screwdriver may not remove the bolt, but it may be necessary for removing the screw that blocks access to the bolt.

Beckwith is correct when he points out that "from a strictly moral point of view, abortion is not a serious moral wrong just because the woman suffers . . ." But it is entirely consistent with a Christian view of morality to believe that *because* abortion is morally wrong, women will suffer.

Beckwith worries that an emphasis on the harm abortion causes to women may fail to convince people of the objective injustice abortion inflicts on the human fetus. On that too, he is right. NRS is not sufficient for achieving that higher end. But it serves a good purpose in and of itself (helping women), and it may yet prove to be sufficient for the purpose of passing restrictive laws that protect both women and, indirectly, their unborn children.

On a final note, I have enjoyed many of Francis Beckwith's written works. Perhaps I bristle too much when he turns his critical eye on my backyard. But his confusion of the premises and arguments I have made is deeply disappointing. In part this has occurred because he has not limited his criticisms to my work alone but has criticized a synthesis of arguments made by three different authors (Mathewes-Green, Swope, and myself) in which the authors have employed similar terminology to mean different things. As a result, the hybrid NRS view that he presents for criticism does not in fact exist.

Sadly, a small number of pro-life advocates have criticized our pro-woman/pro-life approach not on philosophical grounds, but simply because they believe women who abort are "murderers" who should not be helped or protected. I am deeply concerned that Beckwith's philosophical critique of our misstated views will be used by some as an argument against "breathing with two lungs—one for the woman, one for her child." Unfortunately, there are some people who would truly prefer to keep the abortion debate polarized between the perceived interests of the women and those of her unborn child. NRS advocates have struggled for nearly twenty years to show that these interests are not irreconcilable. It is my prayer that Beckwith's misinterpretation of our premises, arguments, and goals will not add to the confusion. E&M

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CLINICAL ETHICS CASE CONSULTATION[1]

ROBERT D ORR, MD, CM

Question:

Should we seek a court order to use blood products and/or extra-corporeal membrane oxygenation (ECMO) on this critically ill child of Jehovah's Witness parents?

Narrative:

This infant was born in a community hospital 20 hours ago to a mother known to have a cervical culture positive for beta-Streptococcus. Soon after birth, she showed signs of possible sepsis and was transported to the Neonatal Intensive Care Unit (NICU) at this hospital 8 hours ago. She has been treated aggressively, but she has had continued poor oxygenation. From a clinical standpoint, it is time to consider transfusion, and it is approaching time to consider the use of ECMO. Neither of these has yet been done for this child because her parents are both Jehovah's Witnesses, and they decline consent for either of these procedures on religious grounds. Other measures are already in use (high-frequency ventilatory assistance, inhaled surfactant, experimental nitrous oxide, IV erythropoietin) with the specific intent of avoiding transfusion and ECMO.

ECMO was introduced as innovative therapy several years ago as a short-term substitute for failed lung function which has not responded to ventilatory assistance. It has become increasingly accepted and available with time, but it is only in the past few years that it has been considered standard of care for several neonatal conditions when they are not responsive to standard or high-frequency ventilatory assistance. Exogenous blood is required to prime the ECMO pump.

Because of his reluctance to impose risky invasive procedures on an unwilling family, this infant's neonatologist has consulted by phone with 2 nationally recognized leaders in ECMO therapy in different areas of the country. They both state that transfusion and ECMO are standard treatment for a child in this condition, and they would both seek a court order for imposing treatment at this time. They predict a 70-80% chance for intact survival using these modalities.

This is the first child of a young couple who have been members of the Jehovah's Witness faith since adolescence. Both of their families are also Jehovah'sWitnesses.

Assessment:

This neonate is critically ill and will almost certainly die if she does not respond to aggressive treatment within the next few hours. Her parents are unwilling on religious grounds to consent to the use of the next step in standard therapy.

Discussion:

Saving lives and preventing disability in children are 2 of the primary goals of modern pediatrics, and all efforts should almost always be used to achieve those goals. Parental religious objections to the use of specific treatment modalities (e.g. Jehovah's Witness objections to the use of blood products based on their interpretation of scripture that this will lead to eternal separation from Jehovah) are important family and societal values which should not be ignored or overridden lightly. In most situations it is ethically preferable to honor such

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objections to a point, e.g. to accept a lower oxygen-carrying capacity than one would accept in another child, or even to place a child at slightly greater risk of complications. However, when a child's life is in danger, physicians have been encouraged by society and sanctioned by the courts to impose life-saving blood products over parental objection. Seeking a court order to use other more invasive therapies or those which are innovative or unproven is even more problematic. Such measures may be ethically appropriate in some situations when there is a high likelihood for survival.

In this case, high-frequency assisted ventilation and other ancillary measures are already in use with continued hopes for improvement without having to use either of the objectionable modalities. If these are not effective within the next few hours, however, the physicians are struggling with their competing obligations to save this child's life and to honor her parents' religious beliefs.

If the therapies in question had only a 5% chance of success, it would be ethically preferable to honor the religious views, even though the child would surely die. If, on the other hand, there were a 95% chance of intact survival with their use, it would clearly be standard clinical practice (with good judicial precedent) to seek the needed court order. Decisions between those extremes are less clear, but in my estimation, if the chances of intact survival are greater than 50%, I believe the court order should be sought, but only if other measures are clearly not working.

Recommendations:

(1) It is ethically permissible to continue current measures, and to postpone transfusion or ECMO for a short while in an attempt to honor the parents' objections. However, seeking a court order should not be postponed beyond a point of irretrievability.

(2) Before that critical point is reached, the appropriate judge should be approached, and he or she should be fully informed of the risks and benefits of both transfusion and ECMO.

Thank you for asking me to participate in the deliberations about the further management of this baby. If I can be of further assistance, please feel free to call me at home tonight or at the office or on my beeper tomorrow.

Follow-Up:

12 hrs: The infant responded well to continued therapy and was oxygenating better. Her hematocrit was low, but stable.

day 4: She is continuing to improve. Her hematocrit remains unchanged. Attempts are beginning to wean her from the ventilator.

day 5: She has been extubated successfully and is doing well.

day 7: She is off antibiotics, her hematocrit is improving, and she is beginning to suck.

day 14: She was transferred from the NICU to a step-down bed. She is doing well but still needs gavage feeding.

day 21: She was discharged home. Her parents are very grateful for her progress and for the extra efforts to avoid the use of blood products. E&M

1 The cases discussed in this column are based on real cases. Some demographic and clinical information has been altered to protect the privacy of patients, families, and professionals.

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Vol 18:2, Summer 2002

THINKING TWICE: CLONING AND IN VITRO FERTILISATION

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Human cloning and *in vitro* fertilisation (IVF) may seem to be very different procedures. Certainly, they are regarded very differently by many people at the present time. IVF is seen as a mainstream procedure raising few ethical problems, while cloning, or 'reproductive' cloning, is widely regarded as beyond the moral pale. In this essay, I argue that the two procedures have more in common than might at first appear, although cloning does raise some new issues that need to be separately addressed. I begin with these new issues, before looking at points of similarity between IVF and cloning.[1] Finally, I return to discuss ways in which the two procedures diverge.

Genetic similarity and human identity

An objection often raised to cloning, one which does not apply to IVF, is concerning the effect of genetic similarity in the way we see ourselves and are seen by other people. The clone is not, of course, the same individual as the individual from whom he or she was cloned. Rather, cloning can be regarded as a form of asexual reproduction. Just as, in the case of natural twinning, an individual embryo can give rise to one or more new embryos,[2] so an individual adult could give rise to one or more clones. An individual can produce a new individual, with a totally separate identity. The physical or, for that matter, the mental similarity of two individuals does not make them one and the same individual.

Similarity, however, if carried to extremes, cloning can have harmful effects on the individuals concerned. The case of identical twins is often cited as evidence that genetic similarity is in itself innocuous.[3] It should be noted that identical twins can, in fact, experience problems in their social and personal development (Bryan 1998, pp. 813-815), particularly in those environments where others do not adequately recognize their separate identity. Such problems would be, on the face of it, more likely to occur in the case of cloning, since, whereas twins are not deliberately created as identical, clones would be created, at least in some cases, *in order to* resemble someone else. Those who have gone to such lengths as cloning to ensure similarity between two human beings have shown, by that very fact, their wish that these two human beings be very much alike.

Unlike twins, clones would (or could) be widely separated in age from the person from whom they were cloned. The difference in age, where this existed, would create problems in itself. The clone would see the person from whom he or she was cloned acquiring certain features, whether positive or negative, and would feel himself or herself in tension with this pre-existing life (Holm 1998). Similarly, the person cloned would feel drawn to compare himself or herself with the clone. Even if clones would never meet each other or the person cloned,[4] the mere knowledge that genetic counterparts to themselves existed would be likely to give both the clones and the original a sense of incompleteness, and prevent them, at least to some degree, from concentrating on their separate lives.

Ethics & Medicine, 18:2 (2002):35-43.

Genetic similarity does not affect in any way the moral separateness of those who are similar to each other. Nonetheless, genetic difference is a powerful symbol of separate identity, which should not be abandoned deliberately. Physical differences, starting with genetic differences, visibly witness to the fact that each person is a separate individual with his or her own life to lead. This is particularly evident when we think of large numbers of clones being produced together—for example, twenty at a time. While each of the clones would be a separate human being with his or her own life to lead, clones would likely be treated as interchangeable by some of those with whom they would have to deal. People value less what they see as interchangeable. If (as I will argue) the symbolic content of production is inappropriate to human generation, that of mass production is even more inappropriate.

Natural and artificial processes

It has been suggested that cloning by embryo splitting resembles natural twinning, and may for that reason be morally preferable to cloning by nuclear transplantation (Human Genetics Advisory Commission and Human Fertilisation and Embryology Authority, January 1998, paragraph 8.7). Here, as elsewhere, it should be remembered that nature is not a moral agent. We need a better reason to bring about a process than the fact that this process, or a similar process, naturally occurs. A judgement must be made on the kind of process—healthy or unhealthy—which we are considering and on the social context in which this process would take place. For example, procreation, even where totally 'natural' (i.e., involving no technology) must still be justified by reference to such factors as the parents' commitment to the child.

Healthy human functioning

It is insufficient to justify choosing a procedure to say that it involves, promotes, or closely imitates healthy human functioning. It can certainly be argued, however, that there is more reason to question procedures, which do not involve, promote, or closely imitate healthy human functioning, but instead seriously distort it. Distortions of function do occur naturally, as any doctor can testify. This is in itself, however, no reason for causing them deliberately.

Cloning by embryo splitting, in which the original embryo is, or risks being, destroyed,[5] reproduces what is arguably a natural *dysfunction*,[6] not a natural *function*. There may be some value, at least in some cases, to the imitation of natural functions. In contrast, there is no particular value to the imitation of natural dysfunctions. It is, for example, no better to cause someone's death by causing heart failure—something which can occur naturally—than to cause his or her death unnaturally.

Distortions of function, which will or may cause death, are still to be avoided more than distortions, which will not. For this reason, embryo splitting (and nuclear transplantation using the nucleus or pronuclei[7] of a pre-existing embryo) raises more serious moral objections than nuclear transplantation from somatic cell to ovum, since the individuals produced would or might owe their lives to the death of a previous individual. However, even cloning which does not involve the death of a previous individual involves a distortion of function, which in itself would need to be defended in some way.[8]

Medical treatment

It is doubtful whether cloning could be seen as a medical treatment, even when used

to circumvent infertility in the donor of the nucleus. A medical treatment will normally help the patient have or exercise some function which he or she needs to have or exercise in order to be in better health.[9] As functions are more and more distorted, it is less and less plausible to argue that the process, which distorts them, promotes the healthy functioning of the person or people involved. If cloning were used to enable an infertile man to produce children to whom he was genetically related, no natural function would be restored—even temporarily—to the man concerned.[10] To supply a nucleus to a scientist or doctor so that a clone of oneself can be produced is not to exercise a reproductive *function*, even if a child should result.

Welfare of the child

Leaving this point aside, what are the main ethical objections to human cloning? The most fundamental objections concern the welfare of the child created (Callahan 1997) and the nature of his or her relationships with the social parents and with others. In the first place, there is the physical well-being of the child to be considered. Even after extensive research had been performed—research, which would itself raise very serious moral questions—risks to the health of the child, both long-term and short-term, would be difficult to justify. This would be so even in cases where the motive for cloning was to prevent the transmission of disorders such as mitochondrial disease.[11] The production of children in ways which carry risks to those children needs to be evaluated differently from high-risk treatments of existing human beings, since commissioning couples will always have the option of avoiding conception altogether. More risks can be justified in the attempt to benefit an existing individual with a serious medical condition than can be justified in the attempt to produce an individual who is only produced because a certain procedure is offered. It should be remembered that animal clones are often abnormally large, and have major deformities. There have also been serious health problems in the gestating mother.

Child's sense of separateness

Apart from the medical concerns raised by cloning, there are significant psychological concerns raised, including the effect already mentioned of genetic similarity on the clone's view of himself or herself. Children—and, indeed, older human beings—need a sense of separateness from their parents and from others for their healthy psychological development. Genetic individuality, while not a *condition* of separateness, is nonetheless a *symbol* of separateness. Normal human procreation carries with it a valuable symbolic content, not only (as I will argue) at the level of sex itself, but also at that of fertilization. The fusion of the parents' genetic contributions to form a new and distinct individual presents itself is at once a symbol of relatedness, and at the same time one of difference. The child is genetically related to both parents, but is not identical to either, just as his or her life is both a new start and owes a debt to the past (Kass 1997, p. 73).

The child is not only physically and visibly different from his or her parents, but (except in the case of identical twins) is also different from his or her siblings. The contingent nature of procreation—the unpredictability of the child's makeup, both mental and physical—also carries with it a valuable message both for the child and for the parents. Genetic novelty and unpredictability serve as a reminder of the forward-looking and flexible nature of good parenthood and healthy child development: of the way in which parents and child should live their lives with a certain novelty and freedom.

Parenthood involves, or should involve, a going 'out of oneself' towards the other: an acceptance of difference. The perennial temptation for parents is, however, to seek excessive control over their children's characteristics, and to value their children only according to how well the children meet their own requirements. Cloning, it is clear, will do nothing to help parents guard against this particular temptation, as cloning will itself involve a very high degree of parental control. Even in the case of natural procreation, children will often need to struggle hard to establish a separate identity from their parents. How much more of a struggle will be needed when the child is genetically identical either to one social parent, or to someone the parent or parents want reproduced?

It is no answer to this objection to assert that there will be significant differences, due to differences in environment, between the clone and the original. The point is not that the clone *will be* in every way similar to the original. The point is rather that the parents will *expect* a high degree of similarity between the clone and the original, particularly if such an expectation is the reason why the clone has been produced (Holm 1998, p. 162).

Cloning and human lineage

Children need a sense of separateness from their parents; they also need a clear sense of lineage. The potential of cloning for the disruption of human lineage is, in fact, considerable; as it is quite unclear what relationship the clone would have to the original. Even where two people of different genders have been used to produce a clone, he or she will have literally no genetic parents in the normal sense of the term. Instead, he or she will have a provider or providers of a nucleus and/or enucleated ovum—or indeed, in the case of embryo splitting, a precursor produced and destroyed in order to create him or her.

Cloning is asexual in a more radical sense than IVF and similar techniques, in that two people of different genders are no longer required. Thus a single woman could have a child using only her own genetic material: surely a remarkably solitary, rootless, and narcissistic form of reproduction. A lesbian couple could have a child, using a nucleus from one partner and an enucleated ovum from the other.[12] In either of these cases, the child would be deprived—not by accident, but by deliberate choice—of both a social and a genetic father. It is difficult to argue that a child subjected to this dual deprivation would be favourably affected in her relations with the sex, which contributed neither to conception nor to postnatal care.

Other reproductive techniques

Similar objections can be raised, to some extent, to other forms of human reproduction. For example, existing techniques already make it possible for single women and lesbians to conceive and bring up children in the absence of a father. While the child conceived will *have* a genetic father, he or she may not *know* the genetic father, and is in any case deprived of the father's contribution to his or her care. Even where the child is brought up by a heterosexual couple, and thus by a social father, the child may not know his or her *genetic* father if he or she is the result of 'donor' sperm. In the same way, in the case of ovum donation, while the child will *have* a full genetic mother, he or she may not *know* the genetic mother. The 'donor' is excluded from social parenthood, if not from full genetic parenthood.

In evaluating cloning, we need not, and should not, accept the status quo in other areas of reproduction.[13] Many of the problems cloning raises are, indeed, raised by

other ways of having children. Gamete donation, in particular, can be seen as irresponsible, however well intentioned. One should not deliberately generate a child whom one will never see or help to bring up. It is disorienting for 'donor' offspring that their genetic makeup has been partially determined by a stranger with no involvement in their lives (Turner and Coyle 2000; Cordray 1999/2000).[14] It is far from clear that responsibility in procreation does not preclude the deliberate conception of children for whom one intends to take no responsibility as a parent. This objection would also apply to cloning where the person cloned was not the social parent of the child; more generally, cloning, like gamete donation, involves a distortion of family relationships.

Production of children

There are other features of cloning that are shared by existing reproductive techniques. In particular, one very basic feature is shared by IVF (among other procedures), whether or not involving donation. This is the fact that, in these procedures, the child is the outcome of an act of production: an act, which bears a close resemblance to any other manufacturing process.

The symbolic content of this process has, it can be argued, a harmful effect on the way in which the 'product' is then treated. To produce a child as if he or she were an artefact, by controlling raw materials, creates a situation in which the child is liable to be treated as an artefact thereafter. In contrast, sexual procreation by those who are committed to each other and to the nurture of new lives has its own symbolic content: that of interpersonal giving and receiving. An act with this symbolic content is more appropriate to human generation and will help the couple to respect as a person any child who may result.

The objection is not, it should be noted, to the use of technology in human reproduction. Technology which helps a couple to conceive a child by sexual means would be accepted on this theory, since it leaves intact the symbolic content inherent in sex where this constitutes mutual unconditional self-giving. The objection is rather to technology which replaces, rather than assists, this kind of sexual procreation, and substitutes for an act of giving and receiving—with all its natural, personal connotations—an act of manufacture. Just as *buying* a child has the wrong connotations for becoming a parent, so, too, does *producing* a child.

Mentality of production

What is the evidence that this kind of act is harmful to people's attitudes toward children? In the case of IVF, there is, in fact, no doubt that the 'product' of the process is normally treated—at least in the early stages—as if it were a product in fact. In IVF, the 'producer' mentality can be seen in the way in which IVF embryos are, in practice, dealt with by parents and clinicians. These embryos are mass-produced, screened, discarded, used in experiments and so on; in short, they are treated as products or possessions under adult control. Such *de facto* expressions of the 'producer' mentality are sometimes confirmed by explicit statements on the part of IVF patients. For example, one study found that over 90% of IVF patients regarded the embryo as their property (Fisher 1989, p. 156).[15] Of course, such attitudes can and do change over the course of the parent-child relationship, in the case of those offspring who are implanted and subsequently born. However, such attitudes certainly provide an extremely poor start to the parent-child relationship, and can, indeed, prevent this relationship—in the case of many IVF conceptions—from ever getting off the ground.

The embryo is a human being or organism at an early stage of life. He or she has interests (without, of course, *taking* an interest) in his or her possible fulfilment as an older human being. This is, of course, a view which is disputed, and one I have defended elsewhere.[16] If it is correct, however, then commitment on the part of parents to their child is no less important at the embryonic than at a later stage. Clearly, such commitment is rarely found in the context of IVF, where couples act more like owners or producers than like parents of a child. Similarly, those who literally produce the embryo—the IVF scientists—show little commitment to his or her care.

With cloning, too, those prepared to defend the procedure show by their proposed applications a 'producer' mentality towards the envisaged 'products' of cloning. To begin with, there is the proposal to produce clones for use in non-therapeutic research (a procedure euphemistically described as 'therapeutic' cloning[17]). Far from being, as some maintain, the most reasonable suggestion for the use of cloning,[18] this is a particularly blatant example of the 'producer' mentality. Similarly revealing is the long-term proposal to use embryos's clones to generate tissue for transplants to older human beings. If the embryo is itself a human being, albeit a very young one, this is no more defensible than any other use of people for their parts.

Less grossly exploitive, but nonetheless disturbing, are proposals to 'replace' the dead by cloning. It is both dishonest and cruel to offer to 'replace' an aborted human foetus by what would be another child entirely (Rogers 1997).[19] It would be similarly dishonest and cruel to encourage the belief of those who think they can 'cheat death' by making a clone of themselves. Genetic similarity must not be confused with literal sameness of identity. Those who die will not be brought back to life by cloning. In the case of abortion, those who die can, indeed, be seen as wronged twice over in being first deprived of their lives and then used as unconsenting sources of genetic material. In this last case, there would be a danger that women who were otherwise reluctant to abort would be induced to do so by the promise or suggestion that the child could 'come back' when they were ready to be pregnant. Society would once again demonstrate its willingness to terminate existing human lives, as well as its willingness to go to extraordinary lengths to generate new lives if desired. The ingenuity devoted to aborting, freezing, and cloning the foetuses in question would be, some would say, less perversely employed in supporting their mothers through pregnancy to term.

New issues raised by cloning

Like other techniques, including IVF, in the area of assisted conception, cloning invites those who choose it to adopt a 'producer' mentality towards children. In some ways, however, cloning would constitute still more of a production-type process than existing techniques. The symbolic content of mass identical production would be still less appropriate to human generation than that of production—or even mass-production—*per se*. Moreover, to the 'quality control' of human embryos—which cloning would doubtless reproduce—would be added control over even non-disease features of children. Even more than in the case of IVF, parents would be invited to accept the child conditionally, as he or she would be constructed to meet very detailed requirements on their part.

In the case of IVF, the focus of the parents is on a healthy child. After the child is born, the parents may want to 'play down' the way in which the child was conceived.[20] The child will also have some opportunity of forgetting, in the course of daily life, the circumstances of his or her conception. In contrast, in the

case of cloning, the focus of the parents is much more on the future: the parents want not just a child but a 10 year old, a 20 year old or a 30 year old with certain characteristics.

Visibility of cloning

It should be remembered that cloning, more than IVF,[21] would be visible in the child's appearance. The child's facial features, for example, could be a daily reminder, both to the child and to the parents, of the circumstances of his or her conception. The tension between the parents' expectations and the child's wishes and ability to meet these expectations may thus be felt on an ongoing basis.

If the child is a clone of someone famous—and/or one of many clones—the child may bear the signs of his or her origin plain for everyone to see: the signs of someone produced by artificial means to meet someone else's very specific expectations.[22] Quite generally, genetic privacy—something we normally go to some lengths to protect (Andrews 1998)—will be unavailable in the case of clones, as their genotype will already exist.

Cloning and 'genealogical bewilderment'

Cloning would, moreover, replace not only sexual procreation but its outcome: fertilization. IVF impoverishes parenthood—particularly where 'donors' are involved—while cloning would distort it to the point of being unrecognisable. The primary role of the agent in procreation would be handed over even more completely to technicians, since prospective 'parents' would be reduced to providers of parts even smaller than a gamete.

The child's sense of confusion based on his or her all-too evident resemblance to the person cloned would be compounded by confusion with regard to his or her lineage (what some have called the 'genealogical bewilderment syndrome'). Whereas in the case of existing techniques involving donation, the child is deprived of one or both genetic parents, in the case of cloning there is not even a genetic parent, in the familiar sense, of whom he or she can be deprived.

Positive eugenics: commercial applications

Finally, there is the fact that cloning lends itself, as positive eugenics, to commercial exploitation of a most distasteful kind. I will not attempt to deal with this aspect of cloning in any kind of detail. However, it would appear that cloning 'for birth' has a certain commercial potential,[23] bearing in mind the fact that even healthy couples (or prospective single parents) would be in the market for cloning procedures. Positive eugenics is, of course, with us already—for example, in the form of sperm selection from those with high IQs. How much more attractive a proposition will positive eugenics become when the features of the child to be conceived can be more firmly guaranteed?

Conclusion

Cloning does, then, raise some new issues, in addition to those raised by existing procedures. It also raises more familiar issues, which should be urgently addressed. There is much we can learn from the way IVF and similar techniques are affecting our attitudes towards children. There is no reason to assume that cloning will have a less damaging effect. On the contrary, it would appear that cloning, which takes us one step further down the path of child manufacturing, will be still more harmful to the way in which the child produced is treated and regarded. E&M

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1 This essay draws extensively from the Linacre Centre Submission on Human Cloning to the Human Genetics Advisory Commission and the Human Fertilisation and Embryology Authority (April 1998).

2 The number produced would depend on whether or not the original embryo was destroyed in the process of splitting. If splitting is symmetric, so that neither resulting embryo is more continuous with the original embryo than the other, then it would seem that the original embryo has ceased to exist (Watt 2000, pp. 59-60). The two resulting embryos, who are not numerically identical with each other, cannot both be identical with the original embryo. Normally when death occurs in living beings there are non-living bodily remains. However, that this is not always so can be seen from the case of chimeras, where one embryo is simply absorbed by another living embryo.

3 See, for example, Harris 1997, p. 353. More recently, Harris has argued that even if clones are in some way disadvantaged, their creation is permissible providing their lives are, on balance, worth living (Burley and Harris 1999). Such a standard for procreating children is, however, lax to a ludicrous degree: it could be met by parents who conceived a child to sell him or her into slavery. In their paper, Harris and Burley fail to distinguish between disadvantages for children which are caused by procreative choices which have an inherent tendency to distort attitudes to children and disadvantages for which those who procreate are not in this way responsible. They also fail to distinguish between morally inappropriate natural conception, which cannot be prevented except at great cost to personal liberty, and morally inappropriate laboratory conception, which is much more readily prevented.

4 It is worth noting here that identical twins who have been separated will often deeply resent the loss of so much of their lives that should have been shared with their twin (Bryan 1998, p. 813).

5 See note 2.

6 The evidence for this lies not only in the fate of the original embryo (see note 2) but in medical risks to the offspring resulting from the split. Quite generally, twins are at more risk than singletons of disability and early death; there is some evidence that identical twins are particularly at risk (Bryan 1998, p. 813; Little and Bryan 1988). Deliberate embryo splitting could itself create problems: mice resulting from the artificial splitting of embryos have been found to be weaker than other mice (Wright 1997, p. 75).

7 Here I am assuming that the embryo originates after sperm entry, but before syngamy, so that the human individual is already present at the pronuclear stage. See Watt 1999, p. 90; Watt 2000, pp. 61-62.

8 The fact that some procedures involve a distortion of function seems intuitively to be at least a *prima facie* reason against it. Tube-feeding, for example, is an acceptable response to the needs of those who cannot take food normally. It does not seem so easy to defend in the case of healthy adults on a diet.

9 There are, however, cases where the point of medical treatment seems to be the prevention of some form of dysfunction, without in any way promoting a function that is damaged or absent. We might think of the case of sedating a terminal patient whose pain cannot be otherwise controlled. The only function promoted here is sleep, while the aim is to prevent the psychophysical malfunctioning involved in serious pain.

10 A similar point can be made about the use of 'donor' gametes in human reproduction. Ovum donation, for example, does not treat an infertile woman in the sense of giving her the power she lacks to conceive her own genetic child. Rather, it simply makes it possible for her to *use* a power—the power to *gestate* a child—which she already has. However, *being pregnant* is not required for health, though having the *power* to conceive and bear children *is* required for health or perfect health in a woman of childbearing age

11 Cloning would not, however, be the only possible means of having children while avoiding the transmission of mitochondrial disease. For one alternative proposal, see Rubenstein, Thomasma, Schon, and Zinaman 1995. For a critique of this proposal, see Watt 1999.

12 One survey on attitudes toward cloning found that lesbian women consulted were opposed to cloning as a way of having children. As one woman commented 'I think this is far more dangerous than anything else that we have talked about because it totally excludes the male at any stage of growing a new child.' (Wellcome Trust 1998, p. 16)

13 For a typically sanguine view of current social practices, which are then used to justify cloning, see Harris 1997; Edwards and Beard 1998, pp. 806-807.

14 See also McWhinnie 2000(a); 2000(b); 1998; Rushbrooke 1999. Rushbrooke argues for the use of the term 'Remote Parent Conception (RPC)' in place of 'sperm donation' and 'egg donation.' To use the term 'donation' implies that only sperm and eggs are involved, that donating sperm and eggs is no different from donating blood, and that the identity of the 'donor' is of no particular importance.

15 The same study found that 82% of patients—well above the national average—supported research on 'spare' embryos to obtain information to help produce normal pregnancies, and that only a quarter opposed the growth of 'spare' embryos in the laboratory to obtain material which might have medical uses.

Some research has found that parents of children conceived by IVF tend to see the embryo as a child or potential child (McWhinnie 1996, p. 363). This makes such parents' consent to the destruction of their embryos in some ways more disturbing. For a description by one IVF parent of her feelings with regard to the fate of her embryos, see Hogben 1998.

16 See Watt 2000, pp. 57-65; Watt 1999; Watt 1996.

17 Similarly misleading is the use of the term 'reproductive' to describe only cloning for birth, as opposed to cloning for research. If the embryo is a human organism, as even pro-cloning bodies have conceded (Human Genetics Advisory Commission and Human Fertilisation and Embryology Authority December 1998, p. 48), there is human reproduction whenever an embryo is created.

18 The production of clones for research is not morally preferable to cloning for birth. It is surely worse to be killed as an embryo, and thus deprived of one's entire future, than to grow up with identity problems, even if these are severe.

19 Cryogenic Solutions Incorporated (CSI) offered to freeze aborted foetuses so that those having abortions could later (in the words of a CSI spokesperson) 're-establish' the pregnancy.

20 I am assuming here that the child knows that he or she was conceived through IVF. Secrecy about IVF and similar procedures—particularly those involving 'donor' gametes—carries problems of its own. See Turner and Coyle 2000; Cordray 1999/2000; McWhinnie 2000(a); 2000(b); 1998; 1996; Blyth 2000; 1998.

21 Where 'donor' gametes are used in IVF, or in other procedures, this is visible to some degree where children look different from their non-genetic parents.

22 Human clones may also be recognizable by an abnormally large navel: a feature seen in animal clones.

23 'Spare part' cloning has also been thought to have commercial potential, though this seems increasingly doubtful (see Aldous 2001). For news on developments in adult stem cell research, which is further advanced than embryonic stem cell research, see the website of Do No Harm: The Coalition of Americans for Research Ethics at www.stemcellresearch.org.

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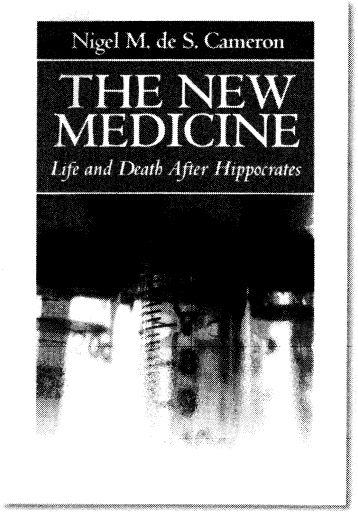

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Vol 18:2, Summer 2002

Evangelical Engagements with Eugenics, 1900-1940

DENNIS L DURST

When I began my research on evangelicals and the American eugenics movement, I thought I would find a large literature of anti-eugenic arguments. I hoped that evangelicals in the period 1900-1940 could prove helpful in current debates in bioethics. For the most part I was disappointed. To be sure, within evangelical circles were occasional voices of critique for one or another of the eugenicists' more extravagant claims about marriage or proposals for social betterment. Historian Edward J. Larson has found scattered opposition to eugenics by Protestants in state legislative records, predominantly in the fundamentalist South.[1] But on the whole the evangelical mainstream in the decades following the turn of the century appeared apathetic, acquiescent, or at times downright supportive of the eugenics movement. In this article, I argue that the evangelicals often accepted eugenics as a part of a progressive, reformist vision that uncritically fused the Kingdom of God with modern civilization. From this analysis I suggest a few strategies we can discern by reflecting on past failures to adequately assess and critique the eugenics movement.

The Shape of Evangelical Engagement with Eugenics

Coming out of the nineteenth century, evangelicals appeared to have a formidable grip on hegemony in American culture. Robert Linder has observed that in the presidential election of 1896, Americans were offered "a choice between William McKinley, a born-again, testifying Methodist on the Republican ticket and William Jennings Bryan, a born-again, testifying Presbyterian on the Democratic ticket."[2] The optimism of many Christians of the progressive era was encapsulated in the founding of a magazine entitled *The Christian Century*.

Reform movements abounded in the Progressive Era, most notably through pan-denominational organizations whose activist energy was provided by middle-class, traditionalist Protestants. The Woman's Christian Temperance Union (WCTU) promoted an agenda of social reform for which banning alcohol was merely the tip of the dry iceberg. Founded in 1874, the WCTU became the largest women's organization of the Victorian era, numbering 200,000 members by 1892, and over 344,000 by the year 1921.[3] The watchword for the WCTU became "home protection," and members worked for women's suffrage under that rubric. While these women often supported conservative and traditionalist assumptions concerning the roles of wife and mother, they also participated in activities that helped blur the lines between private and public spheres. Frances Willard, founder of the WCTU, eventually oversaw nineteen departments, "each one devoted to achieving a specific social-reform goal, ranging from child-labor laws to international peace, and from arbitration to social purity."[4]

One form of social purity found in temperance reform literature of the early decades of the twentieth century was an increasing aversion to the children of the underclass. An important by-product of a complex interplay of scientific and popular theories about human heredity became temperance reformers'

Ethics & Medicine, 18:2 (2002):45-53.

increasing fear over the degeneration of America. Habits such as alcohol abuse and smoking, mental conditions such as congenital mental retardation, and a wide array of sexual practices all entered into a growing laundry list of ills to which solutions both "scientific" and "Christian" were proposed.

The National Purity Evangelist for the WCTU served as a lecturer for the National Purity Association, and a lecturer of the Correspondence School of Gospel and Scientific Eugenics.[5] Her 1906 marriage manual, *The Way of God in Marriage,* exemplified an effort to weave scientific and biblical authority together into a virtually seamless argument. For this author, whose name was Mary E. Teats, children in the womb could be permanently injured not only by alcohol, but also by sexual intercourse during gestation and even by the mother's thought processes while carrying her child. Echoing the starkly elitist rhetoric of activists in the eugenical sterilization movement, she proclaimed:

> The great and rapidly increasing army of idiots, insane, imbeciles, blind, deaf-mutes, epileptics, paralytics, the murderers, thieves, drunkards and moral perverts are very poor material with which to "subdue the world," and usher in the glad day when "all shall know the Lord, whom to know aright is life everlasting." There are hundreds and thousands of men and women today to whom in the interests of future generations, some rigid law should say, "Write this one childless." Men and women whose habits of life are such as to curse their offspring, should be prohibited from marrying.[6]

In a later section, she connected such unfortunates with Malachi's prophetic rebuke of postexilic Israel's offering of blind, lame, and sick animals as sacrifices. She scoffed at the notion that "the lame, halt, deaf, blind, mutes, imbeciles, idiots, drunkards and moral perverts" could be properly called "God-given children," or considered a proper offering and gift to God.[7]

Was such rhetoric merely an aberration among those who had roots in the nineteenth century evangelical reform ethos? In degree, perhaps. But in kind, unfortunately, the answer is "no." Both women and men promoted a range of societal reforms aimed at issuing in Christ's kingdom, reforms that included components of the eugenics movement. Social historian Leila Zenderland has identified numerous figures among Bible-believing Protestants who offered similar assessments of what were regularly identified as "paupers," "imbeciles," "criminals", or simply "defectives." According to Zenderland, the melding of eugenic ideals with biblical proof-texts "illustrate efforts by American Protestants to reconcile age-old Christian messages with new eugenic doctrines. In doing so, their writings blurred together the many meanings of a good inheritance—popular, biblical, and now biological."[8] The rhetoric of the "kingdom of God" provided a key nexus between evangelical religion and eugenic ideals of modern civilization. Confident of the ability of moral reforms, achieved by scientific methods, to issue in the kingdom of God, such reformers harshly criticized citizens who lagged behind and thus impeded progress toward a purified society.

The Department of Moral Welfare of the Presbyterian Church in the U.S.A. represents a milder form of support for eugenic thought. In the 1925 annual report to the denomination, the department's General Director, Charles Scanlon, enunciated the list of subjects addressed by the department. Items on the list included: "Social hygiene, protecting the very fountains of life and fostering

wholesome eugenics," and "Defectives and delinquents, caring for the unfortunate, restoring the erring and wayward."[9] Of course, such a brief reference to eugenics gives the student of history little evidence of what policies such a stance embraced. For example, did "protecting the very fountains of life" entail negative eugenics, including birth control and even involuntary sterilization of those in mental institutions? Or was the term "eugenics" used here in a more benign sense of positive eugenics—the careful choice of a healthy mate? Recent scholarship has pointed out the complexity of the term "eugenics" in early twentieth-century discourse. Marouf Arif Hasian, Jr. has noted that:

> As both a science, movement, and ideology, eugenics was popularized in part because of its very ambiguity. To the chagrin of hard-liners, millions of Anglo-Americans believed that the term was simply another name for heredity. At the same time, hard-liners did gain the support of others who believed that the existence of socially stratified communities seemed to provide natural evidence of the immutable physical, biological, and social differences between 'races' and 'classes.' Ordinary citizens who believed themselves to be living 'eugenically' disagreed on the degree to which the cold and harsh 'necessities' of life demanded there be an abandonment of the right to reproduce or the liberty of avoiding sterilization.[10]

Despite its sloppiness, the rhetoric of eugenics was important in making repressive policies toward the poor and mentally ill thinkable, palatable, and practicable. The constant drumbeat of phrases like "the menace of the feeble-minded" and "mental defectives" had its toll in the dehumanization of the "unfit."

One particularly virulent practitioner of a public rhetoric devaluating such persons was John Harvey Kellogg. Kellogg was a colorful character, wearing several hats including medical doctor, educator, theologian, health reformer, and inventor of the cornflake. An excommunicated Seventh-Day Adventist, Kellogg used his magazine *Good Health* to reach a wide audience, and the guest list of his Battle Creek Sanitarium reads like a Who's Who of American elites of the early twentieth century. Kellogg was convinced that poor dietary and moral habits were leading America down the path of "race degeneration." His solution was eugenics, not merely as a set of policies, but as a quasi-religious ideology.[11]

Ever the zealous social reformer, Kellogg was instrumental in hosting and organizing three distinct "Race Betterment Conferences." In 1914, 1915, and 1928, numerous prominent eugenicists as well as interested onlookers gathered to hear the problems of "race degeneration" surveyed and specific proposals for "race betterment" espoused. In the 1914 conference, Kellogg offered in his opening address a gloss on Jesus' parable of the wheat and tares. But instead of enjoining Christian discipleship or spiritual regeneration as the answer to the world's corruption, Kellogg expostulated: "The field is the world of degenerate humanity and the force is the regenerating power of applied sciences." The extent of his pilgrimage away from the evangelical ethos that nurtured him is encapsulated in his statement: "It should be the constant aim of the promoters of this Conference to establish its work on an enduring basis and to promulgate no opinions, nor conclusions, nor recommendations that are not sustained by the immutable truths of science."[12] Though more sober-minded scientists throughout the twentieth century have stressed the provisional character of the scientific enterprise, for Kellogg, at least, perhaps the authority of science had

come to fulfill functions traditionally reserved for the teachings of religious faith.

In Kellogg's remarks to the second Race Betterment Conference in 1915, the emphasis in human procreation had become the efficiency of the animal breeder. Critics of the efforts of eugenicists to arrange marriage unions according to eugenic criteria had argued that such endeavors omitted love from the equation. In a sharp rejoinder, Kellogg reveled in his role as defender of scientific efficiency: "One newspaper said Dr. Kellogg and Dr. Burbank were trying to make the United States into a great stock farm, by breeding for human efficiency. I wish," Kellogg retorted, "we had the power to do that very thing. It would not be such a bad idea," he continued, "it certainly would be a great deal better than to have the United States a great stock farm, breeding mongrels—which is what we are doing now."[13] Human uniqueness, once enshrined in the treasured biblical doctrine of the *imago Dei*, took second place to the greater good of society, as defined by Anglo-Saxon elites such as John Harvey Kellogg. Anyone who did not measure up to his physiological or moral ideal was not fit for the kingdom, or, more precisely, for the forward march of a scientifically efficient and modern civilization.

The rhetoric of evangelical zeal provided the scaffolding of Kellogg's appeal for healthy living. But the underlying edifice had been radically reconstructed when compared with the ideals of nineteenth-century evangelicals who called for conversion as a prerequisite to moral reform. The heart of the message had now become physical well being, to be reformed by means of a relentless moralism long on law and short on grace. The later excesses of the American eugenics movement become more explicable when we explore their connection to the emotional power of the older evangelical rhetoric employed by figures such as Kellogg. "The human race is bound to extinction," he intoned, in the familiar terms of the camp evangelist's endless warnings about the end of history, "unless a radical reform in habits of life can be effected." Science and religion were one for Kellogg, as he continued: "Every person who has been enlightened in relation to this fact ought to become an earnest missionary of the true principles of right living, a preacher of the gospel of health both by precept and example." The physicality of the appeal was, for Kellogg, a sacred calling, as he challenged his readers with the following charge: "Let us hope that every reader of GOOD HEALTH will aid in the propaganda of the principles of physical righteousness." He explicitly commended the efforts of Irving Fisher, a director of the Eugenics Record Office.[14]

Some evangelical intellectuals offered public opposition to the more extreme forms of eugenics. For example William Hallock Johnson, a frequent contributor to the *Princeton Theological Review*, then a leading journal of evangelical thought, expressed skepticism over the philosophical and scientific viability of eugenics.[15] He critiqued the philosophical notion underlying eugenics, namely, that "the struggle for existence is transferred to a struggle among the constituents of the germ plasm." Johnson had more than a decade earlier voiced his concern about the loss of free will to modern deterministic philosophies rooted in scientific claims.[16]

The largest corpus of writings on eugenics by an evangelical in this period came from the Lutheran Church Missouri Synod's Walter L. Maier. Maier served for many years as editor of the youth-oriented *Walther League Messenger* and

became the leading voice of the immensely popular radio ministry, *The Lutheran Hour*. Maier addressed eugenics throughout his marriage manual *For Better, Not for Worse*, which went through at least six printings.[17] It is important to point out that in the 1930s when this book appeared, the eugenics movement was beginning to unravel. In part this came from developments in genetics that made the hereditarian explanations of complex human behaviors favored by eugenicists appear ludicrously simplistic. Furthermore, by the late thirties news of Hitler's extreme applications of eugenic principles was already alarming thinkers in the rest of Europe and in America.[18] Maier's criticisms were thus drawn from many contemporary sources of opposition to eugenics, blended with his own conclusions as a biblical scholar and theologian.

Maier made much of the distinction between negative eugenics (prevention of the propagation of those of disadvantaged heredity) and positive eugenics (inducement of propagation by those of "superior" stock). Not wanting to appear unreasonable, Maier did accept, at least in principle, a limited form of negative eugenics. Under the subheading "The Church and Faddist Eugenics," Maier stated that: "the Church is not unsympathetic to a broad interpretation of the eugenic desire to improve the human race. It does not hide its head in the sands of theological abstractions while research in heredity presents its theories of genes and chromosomes." In a moment of ill-informed hyperbole, Maier went so far as to claim that the church "has never protested" legislative efforts in a list of states "where epileptics, insane, or feeble-minded persons" or "any one who suffers from an uncured social disease" are prevented from marrying.[19] The terminological slipperiness of eugenics manifested itself in Maier's claim that:

> If the simple application of common sense in rejecting as a marriage partner any one contaminated with a loathsome and recurrent disease is eugenics; if the careful premarital investigation of physical characteristics is an integral part of eugenics, then every Christian should be a eugenist.[20]

Yet Maier proceeded to demonstrate that such a definition was not, in fact, the predominant understanding of eugenics in Anglo-American society. He asserted that "it has come to denote a peculiarly technical cult and a program of extremist principles that penetrates into almost every fiber of the modern social fabric." He lambasted the "eugenic platform" as "scientifically, morally, and socially reprehensible."[21] He first criticized the scientific uncertainty over the predictability of precise causes of hereditary traits upon which eugenics was based. Such had been admitted by scientists. Maier cited geneticist H. S. Jennings of Johns Hopkins University, as well as other scientists such as Dr. Caswell Grave, a zoologist at Washington University in St. Louis and Sir Arthur Keith, a British biologist. All had panned the simplistic views of heredity endemic to popular eugenics.[22]

Secondly, Maier offered a theological critique of eugenics. Arguing against the "over-stress of the physical and mental" in eugenic thought, Maier cited Matthew 4:4: "Man shall not live by bread alone, but by every word that proceedeth out of the mouth of God." The crux of this critique was thus, "Ultimately, eugenics leaves no room for God. If we cannot run the world of today without God, how can we hope to govern the generation of tomorrow without divine sanction and supervision?" Essentially, Maier attacked eugenics as an egregious instance of pride, the original and frustrating flaw in human nature.

An echo of Maier's sober Lutheran anthropology reverberated through his comment that "Even if this race-building program were biologically possible, the stern element of sin can in a brief moment puff over the house of eugenic cards that has been years in the building."[23]

For Maier, the eugenics movement, which he derided as "this cult of the superman," was guilty of promoting social injustice. He found the studies on tenement dwellers by eugenicists as both condescending and "a startling contradiction of Christian ideals." Couching his criticism in terms evocative of an ethos both biblical and democratic, Maier asserted that "To prevent underprivileged individuals from accepting their inalienable and divinely bestowed pleasures of parenthood is not only a physiological error, but it is also an act of presumptuous discrimination."[24] Maier quoted at length from Catholic essayist G. K. Chesterton's scathing critique of the eugenics program.[25] Maier allowed for state segregation of violent persons (by imprisonment), or those who could spread "physical contamination and infection" (by quarantine). But on the question of sterilization, the case "should stand on indubitable ground." Only when it could be demonstrated "that imbecility will beget imbecility" did the state have a right to "exercise jurisdiction over the bodies of its citizens." Yet even in such cases, Maier raised numerous questions.[26]

Maier quoted approvingly from a German social pathologist, Dr. Ulbrich, who pointed out social influences and upbringing as the sources of most pathological behaviors. He proposed placement in homes and asylums—particularly those operated by churches—as the best preventative measure, not sterilization. He also drew upon the report of the American Neurological Association in 1936 urging that so little is known of human heredity that scientific justification for sterilization is rare and highly selective. Maier concurred with the report's assessment that eugenics enthusiasts were far too alarmist in their assessment of the effects of the breeding patterns of society's "unfit" members.[27]

Maier objected further to "radical eugenics" for what he perceived as "its open alliance with easy divorce and birth control, the inevitable corollaries of selective breeding."[28] Pastoral concern mingled with a theological and social conservatism yielded in Maier a profound distrust of such "modern" developments as meddling with traditional concepts of the married state and child-bearing.

In a subsection entitled "The Eugenic Elysium" Maier provided excerpts from the utopian fringes of the eugenics movement. He cited Richard Marvin Chapman's *A Vision of the Future,* wherein the state provides birth houses, spouses are basically replaced by consorts, and the courting process is directed by doctors using rigorous physical exams. He quoted Frederick Seward, author of *The Making of a New Race,* who offered the prospect of selectively breeding races of giants, pygmies, strong men, and men of superior intelligence. Maier pointed out the Marxist affiliation of H. J. Muller, a biologist at the University of Texas, whose book *Out of Night* essentially predicted the development of *in vitro* fertilization.[29]

For Maier, such notions were utterly absurd and fantastic. Far more advantageous to the human race, in his view, was "the plain sense of duty in matters of health inculcated by the Christian religion." In a catena of scripture

references, Maier offered his down-to-earth pastoral advice as the surer way to the happiness of the next generation:

> If all the young people of the nation could be brought to understand that by the indwelling of the Holy Spirit their bodies are temples of God, that these sanctuaries must not be profaned, that the sins of the fathers are visited upon the children unto the third and fourth generation of them that hate God, that those who sow to the flesh will of the flesh reap corruption, this realization of our responsibilities in matters of physical welfare, coupled with the corresponding understanding of our own intimate relation to the bodies of our descendants, would do more than a thousand years of eugenic dreaming.[30]

Learning from the Mistakes of History

From the foregoing discussion, it is clear that we cannot generalize about "the evangelical response" to the American eugenics movement. Instead, we must speak of varied responses. The rhetoric of the eugenicists seeped into the discourse of Christian social reformers. Sometimes evangelical social reformers employed derogatory terminology for persons with diseases or mental disabilities, even to the point of calling the full humanity and worth of such persons into question. Evangelical criticisms of eugenics came somewhat late in its development as a movement in American culture. By 1940, some 30 states had involuntary sterilization laws on the books.[31] Whatever opposition evangelicals might have mustered toward negative eugenics in those states, it was clearly nothing like the scale of their opposition, for example, to the teaching of evolution in the public schools.

It is important to observe what I hope by now is obvious. The Kingdom of God and modern civilization are two very different realities. In fact, we can now say that they were and are often opposed. The Kingdom of God has room, and, in fact places a high value upon, "the least of these." The Apostle Paul rejected "efficiency" in human relationships when he proclaimed that "those parts of the body that seem to be weaker are indispensable." The Kingdom of God is often hidden, and usually less than obvious. Its paradoxical nature is just what renders it antithetical to the remorselessness of rational social control. Modern Civilization is confident that the means of progress are clear and unproblematic—lacking only the willpower to accomplish Utopia. Citizens of the Kingdom of God will always be diffident and deeply suspicious of such claims. They will always insist "The Kingdom of God is among you," meaning the reign of God among all sorts of people, including the Palestinian peasants originally addressed by Jesus. Modern Civilization would demand that we sacrifice the currently slow and inconvenient for a promised future of beauty and perfection. The Kingdom of God would insist "My grace is sufficient for thee, for my power is perfected in weakness."

What lessons may current evangelicals and others concerned about bioethics and the dignity of human life today learn from the earlier eugenics movement? First of all, I think it is clear evangelicals have good cause to urge caution upon the scientific and governmental communities who promote social policies based upon any science in its infancy. Had such caution been exercised in the early twentieth century, many perfectly normal persons, who had hastily been identified as "defective," might have retained their freedom to procreate. Instead,

thousands were deprived of the basic dignity of marrying and starting families. When evangelicals are accused of recalcitrance or of foot-dragging on such matters as fetal stem-cell research, we have the right and the responsibility to point to the eugenics movement. There we can confidently identify a cautionary tale of scientific and governmental elites striking a Faustian bargain that trampled the very human rights a liberal society purports to hold dear.

Secondly, it behooves evangelicals to support active engagement in research areas that touch on human procreation. A biblical scholar and radio commentator such as Walter Maier could warn the public at large about the excesses of eugenic thought, but only because he was widely read in the literature of his time. More effective still is internal critique from professionals inside the disciplines in question. The absence of talented persons in such fields simply abandons those fields to professionals who may not hold a worldview that cherishes persons as reflections of God's image. Thus, denominations and congregations need to fund promising students in the areas of medicine, nursing, biology, genetics, bioethics, and public policy studies. Beyond mere funding, Christian denominations need to foster a more robust discussion of professional Christian vocations to be lived out intentionally in the public square. We can no longer define discipleship in terms of our daily quiet time.

Thirdly, beyond direct funding of young scholars, we need to provide our youth with resources for sustained lifelong mentoring in character formation. Too often, the Christian worldview is perceived in academia as merely a private affair to be left out of the lab. History shows that to leave one's Christian worldview outside the lab is merely unwittingly to embrace another worldview that tends toward the destruction of human life and purpose.

Finally, evangelicals need to be more astute students of history, particularly the history of theological reflection. Though the eugenics movement saw a handful of Catholic supporters, for the most part the Catholic church was the most vocal critic of the eugenics movement. The resources of a natural rights tradition are available to all, but are known best in Catholic circles. We as evangelicals need to avail ourselves of the nuanced theological anthropology that has developed over the course of Christian history. This includes both Western (Roman Catholic) and Eastern (Orthodox) repositories of theological anthropology. The failure of evangelicals to participate with Catholics in discussions over the *imago dei* in the past does not mean we must perpetuate the same pattern in the future. I already sense openness to just such a fruitful engagement arising from among my fellow evangelicals. Let us encourage such fraternal engagements across the Christian community. Let us work together and further our common cause in the interest of human life and human dignity. E&M

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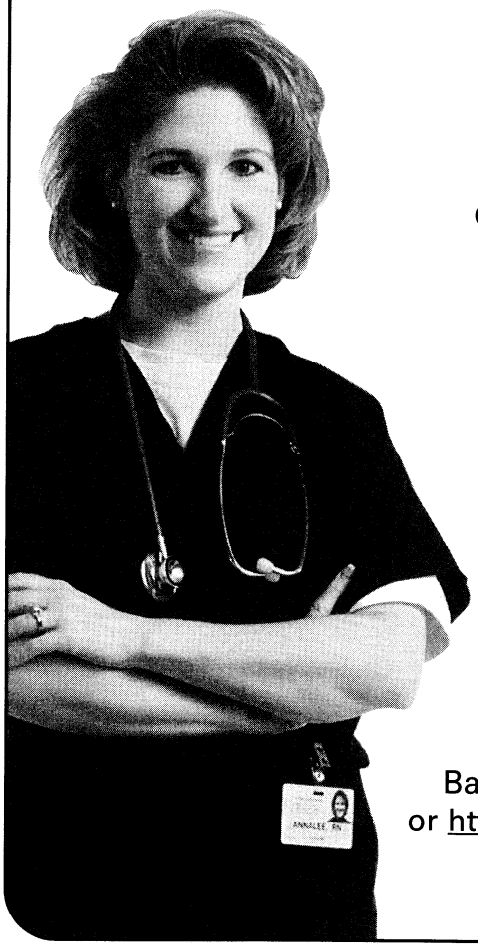

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Ethical Considerations Concerning South Africa's Approval of a Blood Substitute

ALTA E SCHUTTE, MSC

The world-wide problem of blood shortages has been a major concern for years. South Africa (SA) is no exception and faces a critical shortage of blood for transfusions because of the high level of HIV infection among its population. About 25% of the SA population is thought to be HIV positive[1].

A blood transfusion takes place on average every 3 seconds in the United States (US) alone. With only 5% of the US population now donating blood, regional shortages of particular blood types necessitate the shipping and sharing of blood among areas. Another problem is the decline in the number of blood donors coinciding with an increase in the number of senior citizens, the group of people who most often need transfusions[2].

For years the only source of blood for transfusions was donated blood, but the high prevalence of HIV infections forced blood transfusion services to start looking for new and safer alternatives. That is why biotechnology companies, like Biopure, have been working for decades to create oxygenating products which could be used instead of donated blood[3].

On the 9th of April 2001, South Africa's Medicines Control Council (SA MCC) made SA the first country to approve a product that can emulate the work of red blood cells, making it the first human "blood substitute" available anywhere[4,5]. Biopure's blood substitute for dogs is already licensed in Europe and US, but Hemopure is the first blood substitute approved for use in humans[6].

Biopure sources its raw material, the protein haemoglobin, from managed herds of US beef cattle with documentation assuring the origin, medical history, feed, and young age of the cattle[7]. Hemopure thus falls in the class of *haemoglobin-based products* according to Winslow[8], but a number of other classes of blood substitutes are also being developed, for example *perfluorocarbon-based products*, like Oxygent, which are chemically synthesized halogenated molecules.

The product, Hemopure, was approved for the treatment of acute anaemia and avoidance of red blood cells in adult surgery patients[7]. This approval probably constitutes the reaching of a milestone for scientists world-wide, because Hemopure has many characteristics that are urgently needed. These features include:

- purity, thus eliminating the risk of catching infectious diseases—including HIV—from tainted blood transfusions[9];
- compatible with all blood types;
- two-year room temperature stability;
- immediate oxygen-carrying support when there is a need or preference to avoid red blood cell transfusion. The product acts as an 'oxygen bridge' for anaemic surgery patients until their number of red blood cells have increased[7].

Ethics & Medicine, 18:2 (2002):55-62.

- Hemopure's oxygen-carrying particles are 1,000 times smaller than red blood cells, allowing them to flow past blocked arteries as well as into tumours; where, in the latter case, the increased oxygen can assist in radiation treatment for cancer[4].

Ethical Considerations:

The Crown of God's Creation

From a Christian perspective every human being is unique and consists of a number of elements, which makes it difficult to describe man. He consists of social, psychological, physiological and physical aspects—to name a few. Therefore every human functions as a complex being and interacts with other humans in complex ways.

According to the love command in Matthew 22:34-40[10] man has to love his fellow man as much as he loves himself. This command is supposed to give man direction in a wicked society; direction towards his goals in life and direction towards his relationships with his fellow man. A medical researcher always has to bear in mind these ethical responsibilities towards his fellow man. When acting upon the love command, the outcome of one's deeds should be to the benefit of one's fellow man rather than to the benefit of oneself. In the development of a blood substitute for humans, medical researchers act on their responsibility by trying to help people with acute anaemia. By putting a blood substitute for humans on the market as soon as possible, they are acting on their obligation towards their fellow man. They are attempting to bring a stop in the spreading of HIV infections by means of artificially pure blood. At the same time they are helping medical personnel who are facing the dilemma of blood shortages.

From another perspective, however, these attempts of medical researchers like Biopure and organisations like the Medicines Control Council might seem a little suspicious. It seems suspicious that knowledge of the long-term effects of Hemopure is still lacking. Meanwhile SA approved the product before any first world country, which gives way to more suspicion. The inadequate manner in which information was given to the SA public is another factor. These remarks bring into question whether Biopure purely acted on their fellow man's need for the product or whether they rather acted because of probable financial gain that would result from putting Hemopure on the market.

South Africa's Approval of a Blood Substitute

According to Meek[1], Hemopure has not been licensed in Europe or the US where regulators await the results of clinical trials. In SA, however, regulators have been satisfied with data of preliminary trials. The question arises how a third world country, like SA, could approve a human blood substitute before any first world country. One might wonder whether it is SA's situation of blood shortages, which is caused indirectly by a high rate of HIV infection, that urges the use of a safer alternative than donated blood.

SA approved the marketing application which included data from 20 human clinical trials that was conducted over the past nine years in the US, Europe, SA, and Canada[7]. These trials might seem sufficient to prove the safety of the product, but the US and Europe still await the results of following trials. It might have been safer for SA authorities to have awaited the final results to prevent anything unexpected and to be assured of the quality and safety of the blood substitute.

Although Biopure has already received approval in the US and Europe for a different blood substitute for dogs, they do plan to file an application this year for approval of Hemopure in the US and Europe[9]. If these countries approve Hemopure, it might be a relief to SA.

In order to be sure that a product indeed has fewer risks than a usual blood transfusion, adequate clinical testing, research, and trials are necessary to assure the low risk use of the product.

Pros and Cons of Hemopure Utilisation

A safe blood substitute could be of enormous benefit to society. Positive characteristics of Hemopure are its purity, compatibility with all blood types, and two-year stability. These qualities make it much easier to replace acute blood loss in accident victims, surgical patients, and wounded soldiers[2]. The question arises whether all the pros and especially the cons of Hemopure were sufficiently investigated. Anyone or any company who presents such a medical product has an ethical responsibility towards the users of the product. An example of a case of insufficient research was the usage of Thalidomide by pregnant women from 1953. Usage continued until 1961 when scientists discovered that the medication stunted the growth of fetal arms and legs[11].

A few side effects of Hemopure have been listed, namely slightly increased risk of stomach pain, weakness, hypertension, jaundice, rash, discoloured urine, and nausea. Transient mild to moderate isolated increases in enzyme levels may occur and are not associated with clinical hepatitis of pancreatitis[12]. According to Biopure officials these problems are not greater than those associated with regular blood transfusions[13]. Federal officials of Oxygent, the perfluorocarbon-based blood substitute, caution that it is too early to know whether further clinical testing will find unexpected downsides of their product[14].

At this stage information articles on blood substitutes lack information about the long-term side effects of blood substitutes. Despite the fact that Biopure has conducted 20 human clinical trials over the past nine years, sufficient knowledge about the long-term effects that Hemopure might present, is still lacking. Long-term effects could possibly occur in critical organs like the kidneys or liver, which are continuously involved in blood filtering processes. When investigating Hemopure's listed side effects, symptoms like discoloured urine and jaundice, might be a danger sign when considering the close relationship which might exist between these symptoms and the kidneys and liver.

It might have been safer if Biopure and the SA authorities waited before approving a product of which the long-term effects are not very clear. One might note that they should have rather waited another five or ten years to adequately test the long-term effects of Hemopure on humans. On the other hand, however, the significant blood shortages remains. This fact places authorities before a pressing dilemma: the danger of tainted blood transfusions or the long-term effects of a blood substitute.

Bovine diseases

Another possible concern is the utilisation of haemoglobin from cows. According to Biopure officials a process is used which prevents the transmission of bovine diseases to humans, including mad cow disease, which is caused by a mutated protein[13]. However, there are researchers who have raised fears that any medical product made from animals might present a risk of introducing new diseases to

people[6]. A great concern about these products is the potential of introducing into humans unknown disease-causing microbes that might be lurking in the cow products[2].

The clinical director of Britain's Blood Care Foundation said that despite Biopure's reassurances there were likely to be concerns in Britain about the Creutzfeldt-Jakob Disease risk, the danger of an immune reaction to cow molecules, and the potential side effects of artificial blood substitutes. He also mentioned that artificial blood substitutes are likely to be adopted world-wide eventually[1]. Researchers also believe that cow-based artificial blood should not be used on humans until the mad cow disease has been eradicated[15].

After a period of five to ten years the product would have been tested to such an extent that Biopure could reassure the users with a clear conscience that Hemopure is indeed safe for human usage. The period could have also been long enough for the eradication of mad cow disease. The dilemma of using HIV infected blood transfusions, however, still remains.

A Conflict of Interests

The development of a safe, inexpensive, disease-free, and universal blood substitute with a long shelf life for humans has been one of the greatest contests of the past decade. The benefits for society would be huge, as will be the profits for the manufacturer, Biopure, of this first "successful" product. Experts estimate that the world market for a good blood substitute may be as much as $10 billion per year[2].

A point of concern, however, is the fact that the same company marketing the product, namely Biopure, performed the clinical trials. A conflict of interests exists when the same company who produced the product and also tested the product, benefits from the profits. It could mean that Biopure consciously or unconsciously neglected to present possible disadvantages of Hemopure in order to make more profits. It might have been safer if another independent company could have launched clinical trails to test Hemopure.

Informed Consent

After SA's approval for the utilisation of Hemopure in humans, the media informed the public around the globe via internet and newspaper articles. When looking at a few of these articles, whether paper or internet, it seems like the principal message is the same: *SA approves blood substitute.*

Titles:

A great variety of article titles, which are in essence about the same, are seen from SA, to the US, and to the UK. But when scrutinised more closely, subtle differences in the meanings of the titles are seen.

The following are examples of titles which appeared in *international* websites and newspapers:

- S. Africa is *first country* to approve blood substitute[13];
- South Africa *first nation* to approve blood substitute[15];
- S Africa to use blood substitute *from cows*[1];
- South Africa is the *first country* to license a human blood substitute for use in surgery[16];
- South Africa OKs *first blood* substitute for humans[9].

Examples from *South African* titles are the following:

- SA launches *revolutionary* blood transfusion alternative[17];
- SA approves blood substitute[18];
- Substitute' for blood registered in SA[19];
- Substitute for blood registered at MCC in SA[20].

The title of an article is supposed to attract a reader's attention. Therefore certain keywords are used. Although the titles might look approximately the same, it seems as if there is a tendency in international articles to be a bit more negative. SA is internationally known for the high rate of HIV infection and the fact that it is a third world country. This may raise suspicion to the fact that SA is the *first* country to approve the substitute, but it could also suggest that it is probably one of the countries that needs it most. The use of the words "from cows" in a title is only used in international articles. In SA articles, on the other hand, information is given from a more positive viewpoint. Words like "revolutionary" are used and only one article mentions that SA is the first country to use a blood substitute in combination with the words "for surgery". ("Substitute for blood. SA *first country* to register product for surgery"[21].)

Contents:

When giving attention to the contents of the articles, the positive and negative viewpoints are shown more clearly. The most prominent differences are shown when articles from the international source, *Dominion Post*[15], and the South African, *News* 24[18], are compared with one another:

- The first two paragraphs of these articles are word for word exactly the same and give information about the approval and function of the product.
- The South African article has an extra paragraph placed third, which gives positive information: *"Hemopure represents a new and potentially lifesaving treatment approach for providing immediate oxygen-carrying support when there is a need or preference to avoid red-blood cell transfusion".*
- The next paragraphs of both articles are again almost exactly the same and give information about the fact that Hemopure is made out of cow haemoglobin with a technique that prevents the transmission of bovine diseases.
- The fourth paragraph of the Dominion Post is a negative paragraph that occurs in five of the international articles (MSNBC[9], USA Today[13], Independent News[6], New Scientist[16], and Dominion Post[15]), but it could not be found in one South African article: *"However, some researchers have raised fears that any medical product made from animals presents a risk of introducing new diseases to people and believe that cow-based artificial blood should not be used on humans until mad cow disease has been eradicated".*
- The next paragraph of both articles are again almost exactly the same describing the positive effects of a blood substitute, namely eliminating the risk of catching infectious diseases, like HIV, from blood transfusions and the fact the Hemopure can be stored for two years.
- The following paragraphs describe the side effects and are almost the same. This is the last paragraph of the Dominion Post article.
- The next paragraph in the News 24 article gives information about the

company, Biopure, and the company, Netcare in SA to whom the product is licensed. Other positive information is that Biopure plans to file a marketing application for approval of Hemopure in the US and Europe in 2001.

When comparing SA and international articles in general it is noteworthy that no 'negative' paragraphs are included in any SA article—but most paragraphs stress the positive effects. The only exception is a paragraph in News 24[18] about the side effects that are mentioned above. The closest that any of the other articles came to a negative phrase is the following: *"Spokespersons of Biopure say the chance that the product will present neurological diseases like mad cow disease or Creutzfeldt-Jacob disease is less than one in a million and effectively nil"*. This phrase appeared in all three Afrikaans articles, which are almost exactly the same (Volksblad[19]; Beeld[21]; Burger[20]).

'Positive' paragraphs, as the above, were also featured in international articles, but international articles tended to have more 'negative' phrases than their SA counterparts. Of the nine international articles that were collected, eight featured so-called negative paragraphs that were phrased more or less as follows:

> *"Some researchers have, though, raised fears that any medical product made from animals presents a risk of introducing new diseases to people"* (appeared in five articles as mentioned above);
>
> *"Dr Luc Noel, co-ordinator for blood transfusion safety at the World Health Organisation . . . cautioned that its use must be closely monitored to detect unforeseen side-effects"* (appeared in Independent News[6], MSNBC[9], and USA Today[13]); and
>
> *"Side effects include slightly increased risk of stomach pain, weakness, hypertension, jaundice and nausea"* (appeared in SA's News 24[18] and internationally in Dominion Post[15], MSNBC[9], USA Today[13], National Post Online[5], Dallas News[4], and Guardian[1]).

The impression of these articles is that the SA public is not informed sufficiently about a product that is only to be used in their country for the next two years. Internationally people are made aware of the pros and cons of Hemopure—of which both are very important. But 'negative' phrases were conspicuous by their absence in SA articles, and it seems as if these phrases were deliberately left out.

One could say that this information was only SA's 'introduction' to the product. But if the initial information that was given to the public was one-sided, the question arises whether the potential patient will be properly informed about the product's side effects and probable long-term effects.

According to the Medical Research Council's Guidelines on Ethics for Medical Research, a patient's consent will be valid should it be offered voluntarily and be based on *adequate understanding*[22]. Whether a patient will have sufficient knowledge about the pros and cons of Hemopure, is a question left to the future, for the long-term effects will probably not have been determined by then. It is the media's ethical responsibility to present the critical facts to the public in a true, clear, and concise manner. News should not be manipulated in order to prevent people from raising questions. From a Christian perspective the way in which the SA population has been informed about Hemopure does not comply with the love command.

Another concern is a patient's understanding of the product that he or she is about to receive. A physician will not be capable of adequately informing the patient about the product when the physician himself is not properly informed, namely the short-term and long-term side effects. A patient will not be capable of giving informed consent when he does not have an adequate understanding of the product.

Conclusion

For the past fifty years scientists have been looking to produce artificial blood, but it has proven difficult to design a liquid that replicates the complex functions of the red blood cell[23]. Finally scientists succeeded in producing a product that can at least function as an oxygen carrier—an outcome physicians have awaited anxiously for years. The goal of this article was not at all to reject the utilisation of blood substitutes. The positive effects of this product are made absolutely clear by scientific articles as well as newspaper articles. The goal was rather (a) to question the fact that SA approved utilisation of something as radical as a blood substitute *first* and (b) to question the adequacy of information given to SA citizens—the potential patients—about this product.

The conclusion could be made that the SA MCC has approved a product that has not been tested adequately. The possibility exists that such a product could have detrimental long-term effects and endanger the lives of SA patients. It might have been safer if the SA MCC had set higher standards in approving biotechnological products to assure the safety of patients. It seems as if South Africans will be receiving Hemopure because of the fact that their country is in the negative position of having a high incidence of HIV infections. These remarks might raise the question whether South Africans will serve as guinea pigs to answer the questions of first world countries.

A further remark might be that it seems as if the SA media has not informed its public in the same way as the overseas' media did. It seems unethical that the SA media withheld negative information.

There are quite a number of ethical considerations when investigating SA's approval of a blood substitute: SA being the first country to approve a blood substitute, the unknown information about Hemopure's long-term side effects, the probabilities of bovine diseases, Biopure's financial gain, and the withholding of information by the media. But what it all comes down to are the ethical responsibilities human beings are supposed to act upon.

If Biopure tested their product to the maximum, as they were ethically obliged to do, they would have been able to give full information about the long-term effects of Hemopure on humans. They would also have been able to give information about bovine diseases. If adequate information were available, countries world-wide would have rushed to approve a human blood substitute and SA would probably have not been the first. Adequate research would not necessitate the withholding of information by the media or anyone. Biopure and the SA MCC had probably decided that the benefit of a substitute for blood outweighs the risk of what is still unknown. E&M

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Vol 18:2, Summer 2002

BOOK REVIEW

Reproductive Technology: Towards a Theology of Procreative Stewardship

Brent Waters
Trowbridge, Wiltshire: Darton, Longman and Todd, 2001
vi + 148 pp. paperback, £8.95.

As an alternative to the libertarian approach towards medically assisted conception, which is dominant in the Anglo-Saxon world, Brent Waters offers an ethical framework, founded on a theological concept of procreative stewardship, within which to assess the new technologies.

The book starts with an overview of the various reproductive technologies presently available and a critical analysis of the secular conceptual framework of procreative liberty. It is shown that the medicalisation of procreation compartmentalises different phases and aspects of conception, childbearing and parenthood. That is, it is argued that, not only is sexual intercourse increasingly separated from marriage but, also, procreation is increasingly separated from sexual intercourse as in IVF. Likewise, parenthood is increasingly separated from procreation as in gametal donation, while child-rearing is increasingly separated from parenthood as in surrogacy.

A convincing argument is put forward for the view that the medicalisation of procreation both reflects and promotes procreative liberty, with its emphasis on the interests and rights of autonomous adults. The author also makes the point the dominant liberal culture does not count as persons, or at least as full persons, those who cannot exercise autonomy, wherefore parenthood becomes a project and assertion of the adult will, and the child an artefact and possession. Furthermore, it is argued that this kind of attitude directs attention to procedural questions rather than to questions of truth. In other words, procreative ethics becomes the task of spelling out different adult interests and positions in order to arrive at a consensus—which is not really ethics at all.

The cornerstone of the argument is to be found in the second chapter, where the author develops his own ethical framework based on the concepts of life as a gift from God and of ourselves as created in the image of God, coupled with a covenantal understanding of marriage as a vocation with an orientation towards fidelity and family. We are told that God has bestowed the blessing of stewardship on us and expects us to exercise it vis-à-vis the whole of creation. This is in accordance with creation's vindicated order and appointed end in Christ, an order that cannot be perceived by natural reason alone but only in the light of Christ's resurrection. In terms of this order, man and woman are created together for fellowship and shared stewardship so that together they must safeguard creation and enable it to reach its appointed end in the fullness of time.

In line with Karl Barth, the author argues that, from a theological perspective, our corporeal and gendered nature and the man-woman fellowship have normative implications. While the fellowship between man and woman has an orientation towards marriage, even the single person may honour the man-woman fellowship. But marriage is a special sign, covenant, and vocation; it is not just a means of self-fulfilment but a commitment to the main end of which is spousal union. However, so it is further argued, marriage is by its nature also orientated towards becoming a family. Marriage provides the foundation for the covenant and vocation of parenthood. Thus the normative structure of marriage is the basis of the normative structure of the family, which in turn dictates the proper order or procreation. Children and parents belong with another but not to one another. Children are not possessions. God entrusts them to the care of parents.

It is clear that, contrary to the ideology of procreative liberty, this theological account of the normative structure of the family does not affirm the primacy of individual adult autonomy. Rather, it entails a parent-child relationship of equality. In other words, the vocation of parenthood calls for certain virtues and practices promoting a proper attitude towards the child. The

child should be seen not as a project or means of self-fulfilment, but rather as a gift reflecting the loving relationship of its parents and as an expression of mutual and timely belonging.

As the author's substantial ethical conclusion, he argues that his view of the parent-child relationship neither rules out contraception nor certain kinds of assisted conception. And the last three chapters of the book provide arguments defending this claim, while also examining various past and contemporary views on childlessness, parenthood, and assisted reproduction. It is argued that contraception is morally licit to help couples promote the timely births of children, and also, that reproductive techniques are morally licit, provided they do not confuse, impede, or prevent a clear differentiation of familiar roles and relationships, as do AID and IVF using donated gametes, embryo donation, and surrogacy.

The book closes with a discussion of preimplantation and prenatal diagnosis and embryo research. The author argues that the foetus may be tested for therapeutic but not for selective purposes. However, he holds that preimplantation diagnosis and embryo selection may be morally licit in the case of a restricted range of debilitating conditions, provided the technique is not resorted to for the convenience of couples who wish to avoid expensive or burdensome treatment. Embryo experimentation, likewise, is said to be justified under certain circumstances.

The reader may or may not be in agreement with the substantive conclusions reached by the author, but he or she cannot fail to appreciate the lucidity with which a case is built for a theological framework for the moral assessment of the new reproductive technologies and techniques of quality control and research accompanying them.

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