Lecture 12.1: Choice and Reproduction

The troubled area of reproductive ethics is of particular importance because of the association of all reproductive technologies with the beginning of human life—as contested and increasingly politicized area as the end of life issues that have concerned us up until now.

I: Sex and fertility

It takes two to tango: but the two participants in the act of human conception have rather different subject-positions in the act of reproduction. Men have an interest in reproduction. Women are committed. To date there is no substitute for a woman's body in gestating a human being to term.

a—abstinence: chastity and celibacy

b—contraception: barrier methods. Condoms, diaphragms

--pharmaceutical: birth control pills

c—contragestation: prevents the implantation in the uterus of a fertilized ovum

--IUDs: interuterine devises. Mechanical; and quite dangerous

--pharmaceutical: RU 486, Plan B

d—interruption of an established pregnancy: miscarriage (=unintentional)
abortion (intentional)
--elective
--selective
--late term

There are many formal and informal practices allowing / encouraging the availability of women as sexual partners, ranging from dating to monogamous or polygamous marriage through legalized prostitution, traffic in women and sexual slavery.

Along with that there is a great deal of attention to keeping women from avoiding the consequences of sexual activity. Contraceptives for women are by prescription only, while condoms are available in every drugstore, truckstop and bar toilet. Interruption of an established pregnancy has been legal in this society only for the last 36 years, since the landmark case of *Roe v. Wade* in 1973, and is still controversial.

II: Focus on the conceptus

Language: *Gametes* (sperm and ovum) combine. The first stage of the resulting conceptus is often termed the *blasomere* (up to 8 cells). It is an *embryo* until the appearance of the primitive streak at about 14 days; after which it is a *fetus* until birth.

a—where does life begin? (cf. the Evangelium Vita, pp. 545-6)

b—where does human life begin? [status, versus process] Are there bright lines?
In the law, until recently, human life begins at birth. [But in a recent California case the drunk driver who killed a pregnant woman was charged with two murders. And what happened with Scott ?]

c—where does personhood begin? membership in our moral community?
Cf. the debate in some of our readings about moral standing versus moral value—eg Marquis, p. 463, or Steinbock, p. 471.

Despite the contemporary catholic position, in the middle ages human life began at 40 days (cf. Thomas Aquinus) or at quickening, which is usually 4 ½ months.

III: Milestones on the road to birth:

(1) Women's access to *contraception*: IUDs are dangerous to women's fertility. Access to diaphragms and birth control pills is under medical control. Virtually the only protection from sexually transmitted diseases is through condoms, which require the voluntary agreement of the sexual partner, which is not always offered.
(2) *Fertility:* The most common form of birth control in the US is sterilization—tubal ligation for women, and less commonly, vasectomies for men.

Eugenics—discouraging or preventing by sterilization the birth of socially unacceptable or less desirable children—has a long and tragic history in the 20th century. Involuntary sterilization of the blind, deaf, mentally retarded, drunkards or poor was introduced in the US at the turn of the century, and exported to Germany in time for the holocaust. There is a nice capsule summary in SAL's introduction. Because of the negative connotations of the term it has gone out of use in the US, but may be coming back in connection with genetic diagnosis.
(3) *Infertility and IVF:* While women's decisions not to bear a child have been met with social condemnation and resistance, the plight of a woman who wishes to bear a child and is unable to do so arouses great social concern and sympathy, and is the subject of a multi-million dollar unregulated industry: the fertility business. At the moment the definition of infertility is one year of unprotected sex without conceiving.

a—Artificial Insemination by Husband (AIH) or by Donor (AID): the 'turkey-baster" baby. Catholics accept AIH, but not AID.

b—Fertility drugs (e.g. Clonamid) have been developed to encourage ovulation, sometimes with undesired results. International statistics show that the incidence of multiple births—not only twins, but triplets, quads, quints and some higher multiples—have increased world wide.

c—*In vitro* fertilization (IVF) is a complicated, expensive and highly technologized laboratory procedure that is the object of a great deal of scientific attention.

First, hyperovulation, to increase and time the ripening of several ovae at the same time. Next, ovum harvest. Next: *in vitro* fertilization (and in cases of low sperm count, or if you want to be really picky, you can pick one teeny tiny sperm and insert it into the ovum—intracytoplasmic sperm injection).

The pathway of the fertilized ovum can go in several directions. The fertilized ovum at the 4-cell stage is omnipotent: that is, any of the four cells can develop into a complete organism. So you can do a slice and dice and analyze the genetic makeup of one of those 4 cells. If the ovum does not have the genetic defect you are trying to avoid, that ovum can then be transferred—to the fallopian tubes or uterus of the ovum donor, or to the uterus of a surrogate mother—and continue its development.

In fertility procedures it is traditional to implant anywhere from 2 to 4 fertilized ovae, in order to give the largest chance of one coming to term. But up to 12 ovae are often harvested in the first stage of IVF, so there are sometimes "extra" ovae left over that can be discarded, or crytopreserved (frozen) for a second pregnancy later, if desired. Early on the success rate per procedure was 10%; some sources say it might be up to 25% now.

The procedure that led to the birth of the first cloned mammal, Dolly, was a procedure on an ovum harvested from the 'donor' sheep in the first two stages of IVF.

IV: Some Ethical Issues in ART (assisted reproductive technologies)

Some faith traditions prohibit most ART as "unnatural" or as incompatible with loving relationships.

There are some health issues: fertility drugs are very powerful and have as yet unknown side effects. But to be fair: these are not concealed from participants.

Social justice: there are access and distribution issues. This is a very expensive procedure that few insurance companies (and no government payers) will underwrite in this country. The typical IVF candidate is white, middle-class and over 30. Brazil, for instance, has considered outlawing ART because of the large numbers of unadopted or unfostered children already alive and neglected in the society.

Some environmentalists have suggested that it is a technological fix that distracts attention from research into causes of infertility, such as environmental pollutants and contaminants in the food chain and water supply.

As more combinations become available for third and fourth party sperm, ovae, genetic material and gestators, questions of lineage and responsibility become blurred. Who is the mother: the source of the genetic material, the source of the ovum, the woman who bears the child, or the woman who has contracted with the birth-mother? Who "owns" the gametes, or the frozen embryos, if the marriage breaks up? Who is responsible for child support if there is no genetic relationship? There are some fascinating court cases on these issues: truth is stranger than fiction.

Commodification of persons: can you buy a baby? Sell a baby? Is there something analogous to slavery involved here? Are contracts enforceable?

What is the moral status of an "extra" embryo created by IVF? What can be, what ought to be, done with them? Who is to decide that?

Does IVF with all its possibilities of "choosing" children have any implications for the treatment of the disabled in our society? (This is a question that can also be asked of prenatal diagnosis, which is virtually a standard of care for women over the age of 35 because of the incidence in that population of Down syndrome children.)

Does "selective" abortion (for genetic defect) have a different moral status than elective abortion? What degree of disability justifies the termination of a pregnancy? Is there a difference between a selective or 'therapeutic" abortion and an abortion for, e.g., sex selection? Eye color? IQ or musical ability?

Cloning

Dolly

Reprotech since the '70s has developed in such a way as to make possible in 1997 the birth of the first cloned animal, The sheep **Dolly**, in Ian Wilmut's scotch laboratory.

The process went something like this: It involves three women: three female sheep: Lambchop, Hyle and Flowerpot. (Actually it involved a lot more than that—the process had to be repeated something like 260 times before a successful birth.)

A mammary gland cell was taken from Lambchop. (We can call her that because she was slaughtered and eaten before the success of the process.) The nucleus was extracted from that cell. An ovum was taken from Hyle (we call her that because the ancient greeks thought that was what the female contributed to gestation, the matter—and 'hyle' is greek for 'matter.')—and the nucleus, the genetic material, was extracted

from that ovum, and replaced with the nucleus from Lambchop's mammary cell. The resulting egg was implanted in the uterus of Flowerpot, the gestating ewe.

The result is a sheep genetically almost identical to Lambchop.—Dolly is a clone of Lambchop (except for the mitochondrial DNA that came with Hyle's ovum).

> Uncertain whether Dolly would age prematurely because of 'short telemeres' She died this year—euthanized, probably—because of arthritis.

Missy

A marvelous company—Genetic Savings and Clone—has worked for a number of years on cloning of pets—particularly the cloning of a particular dog, Missy. Founded in 1998, a year after the cloning of Dolly, by a wealthy Texas entrepreneur with a dog of whom he was particularly fond, the Missyplicity Project worked for 4 years in conjunction with Texas A&M, and generated GSC to commercialize cloning of pets. Missy died at 15 in 2002 and the project moved to Sausalito. The company succeeded in cloning a cat in December of 2001—dubbed "CC" for CopyCat—and went public in 2002.

Snuppy

Mice, cattle, goats and pigs have also been cloned, and a Korean lab announced earlier this year that they had succeeded in cloning a dog—called "Snuppy," I think.