## New Hampshire House Bill 1719-FN. An act defining human life as beginning at the moment of fertilization for the purposes of prenatal, pregnancy, and maternity services and programs"

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Recently, the author was asked by the New Hampshire State Medical Society to testify before the State of New Hampshire's House Judiciary Committee, to address a bill that would establish the definition of when human life begins. Other states, such as South Dakota, recently passed a ban on abortion. Such legislation will severely limit a woman's ability to exercise her right to terminate her pregnancy. With the present composition of the US Supreme Court, it seems possible that in the not-too-distant future there will be a successful challenge to *Roe v Wade*. It is important that as health care providers we take the time to educate our public officials and general citizenry about the complexity of such issues. The subsequent editorial will paraphrase the statement that was delivered. Fortunately, the bill was defeated. (Fertil Steril® 2007;88:272–4. ©2007 by American Society for Reproductive Medicine.)

The author was asked to testify against the New Hampshire House Bill 1719-FN. "An act defining human life as beginning at the moment of fertilization for the purposes of prenatal, pregnancy, and maternity services and programs." As providers of women's health, it is important that we speak clearly and simply so as to better educate the citizens and legislators of our country and be willing to speak out against such regressive legislation. Below is the paraphrased content of the testimony.

Justice Harry Blackmun, who delivered the majority opinion of the US Supreme Court in *Roe v Wade* in 1973, stated, "We need not resolve the difficult question of when [human] life begins. When those trained in the respective disciplines of medicine, philosophy, and theology are unable to arrive at any consensus, the judiciary, at this point in the development of man's knowledge, is not in a position to speculate as to the answer."

As reproductive endocrinologists, we are medical practitioners who specialize in the clinical area of medicine per-

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forming such assisted reproductive technologies as IVF and ET. As a faculty member of the Dartmouth Medical School teaching medical students, I discuss various ethical topics that challenge reproductive endocrinologists on a daily basis: abortion, embryo freezing, discarding excess embryos, stem cell research, etc. There are many challenging ethical issues that confront not only the medical profession but the business profession, journalism, as well as religion. We all try to discern the "correct" way to act professionally and/or individually.

We live in a pluralistic society, and fortunately our Constitution is not static and has allowed for the creation of amendments to the original Constitution. There were a number of amendments that were invoked in deciding Roe v Wade, but the one that seemed to carry most weight was the 14th amendment. Although "The Constitution does not explicitly mention any right of privacy," Justice Blackmun wrote, "This right of privacy, whether it be founded in the Fourteenth Amendment's concept of personal liberty and restrictions upon state action, as we feel it is, or as the District Court determined, in the Ninth Amendment's reservation of rights to the people, is broad enough to encompass a woman's decision whether or not to terminate her pregnancy." Later, the Justice did go on to state that "The privacy right involved [therefore] cannot be said to be absolute [however]. In fact, it is not clear to us that the claim asserted by some amici that one has an unlimited right to do with one's body as one pleases bears a close relationship to the

right of privacy previously articulated in the Court's decisions. The court has refused to recognize an unlimited right of this kind in the past. . . (Vaccination [*Jacobson v Massachusetts*, 1905], and sterilization [*Buck v Bell*, 1927)."

What ultimately is the question here? Should a definition of when "human" life begins be a private matter or be publicly mandated? The thesis of this editorial centers on the controversies surrounding the beginning of "human" life and is rooted in the questions concerning the process of ensoulment (the acquisition of a nonphysical, spiritual life force): [1] do individuals acquire a soul, and, if so, [2] when does the human soul come into existence? The answers to these questions cannot be gleaned from science. The answers are very personal and based almost entirely on individual beliefs or religious doctrine. For those who do not believe in ensoulment, for example, termination would be acceptable until the time when the fetus could survive independently from the mother. For those who do believe in ensoulment, the timing of that process dictates their personal decisions for such questions as well. The question is not so much when life begins, which is easy, but the more difficult question of when "human" life begins. One is a physical question, the other a "metaphysical" question. This editorial will address the complexities surrounding both the differences of religious doctrine and our knowledge through time of scientific advances.

Since Justice Blackmun acknowledged that because the right to privacy is not absolute, it may be an inherent weakness of *Roe v Wade* to assume that a woman's right to have a pregnancy terminated is protected by the interpretation of this landmark case. A more convincing argument can be made by invoking the first amendment to the Constitution, "Congress shall make no law respecting an establishment of religion. . . ." Our founding fathers had the foresight to build into the Constitution a formal separation of church and state (1).

There are many religions in our country, all of them having an opinion about the origins of human life. Even within the major religious denominations (Roman Catholicism, Protestantism, Judaism, Islam, Buddhism, [some may include Atheism], etc.) there is a diversity of opinion. All religions draw the absolute line at birth (the spectrum of beliefs for the origin of "human" life extends from conception to the point of independent viability); no major recognized religion would hold that infanticide is ethically acceptable.

The official Roman Catholic statement, although not an infallible teaching (ex cathedra), states that "ensoulment" occurs at the time of conception, with the union of the sperm and the egg (2). This is relatively recent, appearing in Pope Pius XI's 1930 marriage encyclical *Casti Connubii* where it stated that abortion was a sin against life. In the early church, because of a lack of medical knowledge, "quickening" (the perception of fetal movement occurring at approximately the fifth month), was thought by some to be the time when

the fetus was considered "human." St. Thomas Aquinas, an early Roman Catholic theologian (1300s), recognized the physical and spiritual dimensions of all living thingsplants, animals, and humans. He thought of the spiritual dimension as a soul. He also proposed a hierarchy whereby human life would demand more respect. He wrote that human life proceeds through developmental stages (hominization) and, conversely, that it may end in various degenerative stages (3). Under such a scenario, the early embryo at the time of fertilization would have a vegetative soul and draw its nutrition from the mother. As the embryo continues to develop, it attains a sensory, or an animate, soul. At some time in the developmental process, when God deems it appropriate, the organism is invested with a human soul. One could also infer that the converse may also occur, the "dehominization" of the person at the end of life. An extension of this thought may apply today to those individuals who enter into a coma without a chance of recovery. The "human" soul would depart, leaving the body with only a vegetative soul. This persistent vegetative state may last for an indefinite time, until the heart fails and all bodily functions cease.

A Hebrew perspective would be at the other end of the spectrum of religious beliefs. For the practicing Jew, the debate to have or not have an abortion is rooted in the context of the situation, as well as the temporal point of the pregnancy. If the mother's health is at risk (including a child with an anomaly), not only would abortion be permitted, it may actually be encouraged. The embryo, and the fetus, is considered a part of the mother's body. The moral status of the fetus is based on the proximity to its own independent viability; it does not have an equal moral status with the mother until the head of the baby is delivered (3). The beliefs of the other religions lie between these two views.

Throughout time, world religions have needed to reconcile their belief systems to new scientific discoveries, two examples being the centrality of the sun in our solar system (4) and the theory of evolution. Today is no different. The many technological advances of modern times have thrust on us the imperative to reexamine the basis of our beliefs in the context of new scientific discoveries.

In speaking to the legislators, it was recounted that it is now possible under the proper laboratory conditions to take skin cells and have them grow outside the body when placed in a culture medium. These cells are living. They have the same genetic code as the individual who was the source of those cells. Do they possess a human soul? On a higher level, does a person with an organ transplant, for example, a heart, have two souls? Exactly where does the soul reside, the heart, the brain?

It was explained to the legislators that all the cells in our body contain a nucleus and that this compartment of the cell contains the genetic code for the individual. I related that although no one has yet cloned a human, several animal species have been cloned. Cloning begins with removal of

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the nucleus from any cell in the body of the individual (animal or human) that is to be copied. The nucleus is removed from a recipient egg cell; under proper laboratory conditions, scientists are able to "coax" the recipient egg to take up the nucleus of the individual being cloned. When this happens, the new cell begins to divide, creating many cells and the subsequent development of a new individual. Sperm is not needed in this process. If our society were to drop its prohibition against human cloning, our theological belief systems would have to reconcile the living beings thus created. Identical twinning (a type of natural cloning) occurs when a single embryo splits, usually during the first 14 days of embryonic development. Siamese twins result when an embryo splits later in the process of embryonic development. When such splits occur, did the initial embryo have one soul or two?

In summary, it is not the role of science to answer these spiritual questions. Although Jewish, Catholic, and the other religious writings and teachings may guide us in making decisions with a moral dimension, scientific information may not be able to assist in formulating a "correct" answer. All

individuals should have the right to take a personal stand on how they act. However, living in our pluralistic society requires that we all remember the uncertainty surrounding some moral questions and the confusion that may be associated with scientific advances. We need always to be cognizant of the necessity to respect the choices of others if we in turn want our choices to be respected. From the perspective of our Constitution's defense of religious freedom, we should avoid making any official public statement of when human life begins.

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