

What Does Science Reveal about When Life Begins?

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The most dangerous place in the world is in the womb. —*Cardinal Sin of the Philippines*¹

The fact that abortion and infanticide result in the destruction of innocent human beings cannot, in itself, be a reason for viewing such actions as wrong. —*Michael Tooley*²

What does modern science conclude about when human life begins?

Many people mistakenly feel that abortion is a “religious” issue. But it is not. It is a scientific issue and, specifically, a biological issue. The scientific authorities on when life begins are biologists. But these are often the last people consulted in seeking an answer to the question. What modern science has concluded is crystal clear: Human life begins at conception. This is a matter of scientific *fact*, not philosophy, speculation, opinion, conjecture, or theory. Today, the evidence that human life begins at conception is a fact so well documented that no intellectually honest and informed scientist or physician can deny it.

In 1973, the Supreme Court concluded in its *Roe v. Wade* decision that it did not have to decide the “difficult question” of when life begins. Why? In essence, they said, “It is impossible to say when human life begins.”³ The Court misled the public then, and others continue to mislead the public today.

Anyone familiar with recent Supreme Court history knows that two years before *Roe V. Wade*, in October 1971, a group of 220 distinguished physicians, scientists, and professors submitted an *amicus curiae* brief (advice to a court on some legal matter) to the Supreme Court. They showed the Court how modern science had already established that human life is a continuum and that the unborn child from the moment of conception on is a person and must be considered a person, like its mother.⁴ The brief set as its task “to show how clearly and conclusively modern science—embryology, fetology, genetics, perinatology, all of biology—establishes the humanity of the unborn child.”⁵ For example,

In its seventh week, [the pre-born child] bears the familiar external features and all the internal organs of the adult.... The brain in configuration is already

like the adult brain and sends out impulses that coordinate the function of other organs.... The heart beats sturdily. The stomach produces digestive juices. The liver manufactures blood cells and the kidneys begin to function by extracting uric acid from the child's blood.... The muscles of the arms and body can already be set in motion. After the eighth week... *everything* is already present that will be found in the full term baby.⁶

This brief proved beyond any doubt scientifically that human life begins at conception and that “the unborn is a person within the meaning of the Fifth and Fourteenth Amendments.”⁷

In fact, *prior* to *Roe v. Wade*, nearly every medical and biological textbook assumed or taught that human life begins at conception. That human life begins at conception was an accepted medical fact, but not necessarily a discussed medical fact. This is why many textbooks did not devote a discussion to this issue. But many others did. For example, Mr. Patrick A. Trueman helped prepare a 1975 brief before the Illinois Supreme Court on the unborn child. He noted,

We introduced an affidavit from a professor of medicine detailing 19 textbooks on the subject of embryology used in medical schools today which universally agreed that human life begins at conception... those textbooks agree that is when human life begins. The court didn't strike that down—the court couldn't strike that down because there was a logical/biological basis for that law.⁸

Thus, even though the Supreme Court had been properly informed as to the scientific evidence, they still chose to argue that the evidence was insufficient to show the pre-born child was fully human. In essence, their decision merely reflected social engineering and opinion, not scientific fact. Even during the growing abortion debate in 1970, the editors of the scientific journal *California Medicine* noted the “curious avoidance of the scientific fact, which everyone really knows, that human life begins at conception and is continuous whether intra- or extra-uterine until death.”⁹

Even 25 years after the abortion revolution that politicized scientific opinion, medical texts today still often assume or affirm that human life begins at conception. For example, Keith L. Moore is professor and chairman of the Department of Anatomy at the University of Toronto Faculty of Medicine. His text, *The Developing Human: Clinically Oriented Embryology*, is widely used in core courses in medical embryology. This text asserts:

The processes by which a child develops from a single cell are *miraculous*....
*Human development is a continuous process that begins when an ovum from a female is fertilized by a sperm from a male. Growth and differentiation transform the zygote, a single cell... into a multicellular adult human being.*¹⁰

The reference to the “miraculous processes in a purely secular text is not surprising. Even a single strand of DNA from a human cell contains information equivalent to a library of 1,000 volumes. The complexity of the zygote itself according to Dr. Hymie Gordon, chief geneticist at the Mayo Clinic, “is so great that it is beyond our comprehension.”¹¹ In a short nine months' time, one fertilized

ovum grows into 6,000 million cells that become a living, breathing person.

Further, medical dictionaries and encyclopedias all affirm that the embryo is human. Among many we could cite are *Dorland's Illustrated Medical Dictionary*, *Tuber's Cyclopedic Medical Dictionary*, and the *Encyclopedia and Dictionary of Medicine, Nursing and Allied Health*, which defines the embryo as "the human young from the time of fertilization of the ovum until the beginning of the third month."¹²

In 1981, the United States Congress conducted hearings to answer the question, "When does human life begin?" A group of internationally known scientists appeared before a Senate judiciary subcommittee.¹³ The U.S. Congress was told by Harvard University Medical School's Professor Micheline Matthews-Roth, "In biology and in medicine, it is an accepted fact that the life of any individual organism reproducing by sexual reproduction begins at conception...."¹⁴

Dr. Watson A. Bowes, Jr., of the University of Colorado Medical School, testified that "the beginning of a single human life is from a biological point of view a simple and straightforward matter—the beginning is conception. This straightforward biological fact should not be distorted to serve sociological, political or economic goals."¹⁵

Dr. Alfred Bongiovanni of the University of Pennsylvania Medical School noted: "The standard medical texts have long taught that human life begins at conception."¹⁶

He added: "I am no more prepared to say that these early stages represent an incomplete human being than I would be to say that the child prior to the dramatic effects of puberty... is not a human being. This is human life at every stage albeit incomplete until late adolescence."¹⁷

Dr. McCarthy De Mere, who is a practicing physician as well as a law professor at the University of Tennessee, testified: "The exact moment of the beginning [of] personhood and of the human body is at the moment of conception."¹⁸

World-famous geneticist Dr. Jerome Lejeune, professor of fundamental genetics at the University of Descartes, Paris, France, declared, "each individual has a very unique beginning, the moment of its conception."¹⁹

Dr. Lejeune also emphasized: "The human nature of the human being from conception to old age is not a metaphysical contention, it is plain experimental evidence."²⁰

The chairman of the Department of Medical Genetics at the Mayo Clinic, Professor Hymie Gordon, testified, "By all the criteria of modern molecular biology, life is present from the moment of conception."²¹

He further emphasized: "now we can say, unequivocally, that the question of when life begins... is an established scientific fact.... It is an established fact that all life, including human life, begins at the moment of conception."²²

At that time the U.S. Senate proposed Senate Bill 158, called the "Human Life Bill." These hearings, which lasted eight days, involving 57 witnesses, were

conducted by Senator John East. This Senate report concluded:

Physicians, biologists, and other scientists agree that conception marks the beginning of the life of a human being—a being that is alive and is a member of the human species. There is overwhelming agreement on this point in countless medical, biological, and scientific writings.²³

In 1981, only a single scientist disagreed with the majority's conclusion, and he did so on philosophical rather than scientific grounds. In fact, abortion advocates, although invited to do so, failed to produce even one expert witness who would specifically testify that life begins at any other point than conception.²⁴

Many other biologists and scientists agree that life begins at conception. All agree that there is no point of time or interval of time between conception and birth when the unborn is anything but human.

Professor Roth of Harvard University Medical School has emphasized, "It is incorrect to say that the biological data cannot be decisive.... It is scientifically correct to say that an individual human life begins at conception, when the egg and sperm join to form the zygote, and that this developing human always is a member of our species in all stages of its life."²⁵

In conclusion, we agree with pioneer medical researcher, Landrum B. Shettles, M.D., Ph.D., that, "There is one fact that *no one can deny*; human beings begin at conception."²⁶

Again, let us stress that this is *not* a matter of *religion*, it *is* solely a matter of *science*. Scientists of every religious view and no religious view—agnostic, Jewish, Buddhist, atheist, Christian, Hindu, etc.—all agree that life begins at conception. This explains why, for example, the International Code of Medical Ethics asserts: "A doctor must always bear in mind the importance of preserving human life from the time of conception until death."²⁷

This is also why the Declaration of Geneva holds physicians to the following: "I will maintain the utmost respect for human life from the time of conception; even under threat, I will not use my medical knowledge contrary to the laws of humanity."²⁸ These statements can be found in the *World Medical Association Bulletin* for April 1949 (vol.1, p. 22) and January 1950 (vol. 2, p. 5). In 1970, the World Medical Association again reaffirmed the Declaration of Geneva.²⁹

What difference does it make that human life begins at conception? The difference is this: If human life begins at conception, then abortion is the killing of a human life.

To deny this fact is scientifically impossible.³⁰

Notes

¹ John Warwick Montgomery, "The Rights of the Unborn Children," *The Simon Greenleaf Law Review*, vol. 5 (1985-86), p. 25.

² Michael Tooley, *Abortion and Infanticide* (Oxford: Calendon Press, 1983), p. 419.

³ Lawyer Cooperative, *U.S. Supreme Court Reports*, vol. 35 (1974), *Roe v. Wade*, 410 US 113, p. 181; 410 US 113 at 159; cf. Harold O. J. Brown, *Death Before Birth* (Nashville, TN: Thomas Nelson, 1977), p. 81, cf. pp. 73-96; John Warwick Montgomery, "The Rights of the Unborn

- Children,” *The Simon Greenleaf Law Review*, vol. 5 (1985-86), p. 64.
- ⁴ Motion filed in the Supreme Court of the United States, Oct. 15, 1971 (Re: No. 70-18 and No. 70-40), titled *Motion and Brief Amicus Curiae of Certain Physicians, Professionals and Fellows of the American College of Obstetrics and Gynecology in Support of Appellees*, Dennis J. Horan et al., United States District Court 1971, pp. 19, 29-30.
- ⁵ *Ibid.*, p. 7.
- ⁶ *Ibid.*, pp. 13-14.
- ⁷ *Ibid.*, p. 64, cf. pp. 19-20, 58-64.
- ⁸ Television program transcript, “Abortion,” Chattanooga, TN, The John Ankerberg Evangelistic Association, 1982, p. 2.
- ⁹ *California Medicine*, vol. 113, no. 3 (Sept. 1970), p. 67.
- ¹⁰ Keith L. Moore, *The Developing Human: Clinically Oriented Embryology* (Philadelphia, PA: W.B. Sanders, 1982), p. 1, emphasis added.
- ¹¹ Thomas W. Hilgers, Dennis J. Horan, *Abortion and Social Justice* (Thaxton, VA: Sun Life, 1980), p. 5.
- ¹² *Encyclopedia and Dictionary of Medicine, Nursing and Allied Health* (Philadelphia: W.B. Sanders Co., 1978), 2nd ed., p. 335.
- ¹³ The Subcommittee on Separation of Powers, *Report to Senate Judiciary Committee S-158, 97th Congress, First Session, 1981*.
- ¹⁴ *Ibid.*, cf. Richard Exley, *Abortion: Pro-life by Conviction, Pro-choice by Default* (Tulsa, OK: Honor Books, 1989), p.18; Norman L. Geisler, *Christian Ethics: Options and Issues* (Grand Rapids, MI: Baker, 1989), p. 149.
- ¹⁵ Landrum B. Shettles, *Rites of Life: The Scientific Evidence for Life Before Birth* (Grand Rapids, MI: Zondervan, 1983), p. 114.
- ¹⁶ *Ibid.*
- ¹⁷ *Ibid.*
- ¹⁸ *Ibid.*
- ¹⁹ The Subcommittee on Separation of Powers, *Report to Senate Judiciary Committee S-158, 97th Congress, First Session, 1981*; cf. Richard Exley, *Abortion: Pro-life by Conviction, Pro-choice by Default* (Tulsa, OK: Honor Books, 1989), p. 18.
- ²⁰ *Ibid.*; cf. Norman L. Geisler, *Christian Ethics: Options and Issues* (Grand Rapids, MI: Baker, 1989), p. 149.
- ²¹ *Ibid.*, *Report to Senate*.
- ²² *Ibid.*, and Richard Exley, *Abortion: Pro-life by Conviction, Pro-choice by Default*, p. 18.
- ²³ Dr. and Mrs. J. C. Willke, *Handbook on Abortion and Abortion Questions and Answers* (Hayes Publishing Co., 1985), p. 40.
- ²⁴ Shettles, *Rites of Life: The Scientific Evidence for Life Before Birth*, p. 113. Note: A few held that life may begin at implantation. However, implantation, while important, in no way defines life.
- ²⁵ The Subcommittee on Separation of Powers, *Report to Senate*; cf. Exley, *Abortion: Pro-life by Conviction, Pro-choice by Default*, p.18; Geisler, *Christian Ethics: Options and Issues*, p. 149.
- ²⁶ Landrum B. Shettles in *Abortion: Opposing Viewpoints* (New York: Greenhaven Press, 1986), p. 16, emphasis added.
- ²⁷ Hilgers and Horan, p. 317.
- ²⁸ *Ibid.*
- ²⁹ *Ibid.*
- ³⁰ But to accept this fact and maintain that taking human life is not morally wrong is incredible. It is even reminiscent of Nazi Germany and yet today such arguments are increasingly accepted (e.g. *Biomedical Ethics and the Law* by James M. Humber and Robert F. Almeder, page 16; cf. note 3).

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