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by

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Roe v. Wade, adjudicated in 1973, has proven to be the watershed between law and science. Justice Blackmun, writing for the majority, said: "We need not resolve the difficult question of when 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."[1]

By essentially eliminating the question of life as the time related *value* for defining rights of the conceived — as opposed to disposal of the conceived — the court was free to establish an arbitrary point, or condition, which turned out to be convenient for the mother, prior to which disposal would be the legal right of the mother. This point was decided to be *viability,* which was cited to be between 24 and 28 weeks post-fertilization.[2]

Blackmun tied *viability* to *personhood,* and marked it as the time at which the fetus could survive "outside the mother's womb, albeit with artificial aid."[3]

167 Distinguished Scientists

Later, in the *Webster* decision, the majority opinion also written by Blackmun, the decision of *Roe v. Wade* was affirmed. However, in this decision, Justice Blackmun used an *Amici Curiae* Brief of 167 Distinguished Scientists and Physicians including 11 Nobel Laureates In Support of Appellees.[4]

Using a reliable source to list the credentials of the 167, the volumes of *American Men and Women of Science* were consulted.[5] True, the 1992-93 edition was used and this might account for 66 not found if they had died and their listing removed in the interim. But, with that caveat understood 101 were

found in the listing. Of that number only 31 used 'development' or 'developmental' in their bios. Of those 31 scientists, 9 were index-described embryologists and one was self-described, but not one was a *human embryologist!*[6] Clearly there is a major problem in establishing credibility for what these scientists say about human development (or what they do not say) "in support of appellees."

The human embryologist knows human development best; but, this source of science was not consulted even though the compelling reasons were obvious.

The Beginning of a Human Life

In the above-referred-to Brief, it is written: "there is no scientific consensus that a human life begins at conception, at a given stage of fetal development, or at birth."[7] Conception, fetal development and birth are wholly biological (more specifically, embryological) terms. There are no implications of philosophy or theology implied or intended in that statement.

The error of this statement is manifest by simple deductive reasoning and through countless observations, experimentally, that the result of fertilization is *the beginning of a new life.*

The Essence of Human Life

Later, in this Brief, it is further written: "The question of when a human life truly begins calls for a conclusion as to which characteristics define the *essence* of human life. While science can tell us when certain biological characteristics can be detected, science cannot tell us which biological (sic) attributes establish the existence of a human being."[8]

The answer to that has been known in human embryology for decades. The best response is to be found in the statement by Wendell M. Stanley, Nobel Prize winner and discoverer of the tobacco mosaic virus:

> The essence of life is the ability to reproduce. This is accomplished by the utilization of energy to create order out of disorder, to bring together into a specific predetermined pattern from semiorder or even from chaos all the component parts of that pattern with the perpetuation of that pattern with time. This is life.[9]

The Fallout From *Roe v. Wade*

The Supreme Court has disdained to reconsider what they decided in *Roe v. Wade* that the beginning of life could not be determined.[10,11]

Thus, in this artificial vacuum many nonsensical statements have been made, such as that by Eleanor Smeal in 1989: "Everybody knows that life begins only after birth."[12]

Such a vacuum also generates specious arguments as to when the *individual* becomes *human* or a *human being.* Thus one finds published such claims that the fertilized ovum, or *zygote* does not have the information for full development;[13] that genetic control of development is the equivalent of "molecular control" and

that such control is retained by the pregnant mother;[14] that *sentience,* self-awareness, marks the onset of *individuation,* which is the equivalent of becoming *human.*[15] These are all interesting academic exercises but have no relevance or significance in defining the beginning of life.

By denying the knowledge of when life begins, the Supreme Court established as a priority that point at which the new individual becomes a human being or is invested with *personhood.* This has led to invoking such ancillary qualities as social, psychic, developmental, functional and genetic individalities.[16]

Thus, this is in concert with Blackmun's applying the fields of medicine, philosophy and theology towards the "difficult question of when life begins."[1]

Life and First Contact

Life as a phenomenon began in the evolutionary sense approximately 3.5 billion years ago when a replicative (reproductive) event became sustained. Many replicative events probably occurred and were not sustained. But, eventually, one of those events marked the beginning of the *continuum* of life, within which we exist, today. Now we can see the significance of recognizing reproduction as the *essence* of life. It sustains the *continuum* of life.

Thus, in sexual reproduction, which evolved later, and produced the advantage of variety, *fertilization* became the time at which the new individual began and sustained the *continuum.* This means that *first contact* between sperm and ovum became (and is) the supreme moment for initiation of the *continuum.*

With the timed sequence of events after *first contact,* a process occurs which brings together the chromosomes of the spermatozan with the chromosomes of the ovum. This is called *syngamy.* This so-called stage has been suggested as the onset of individuation. In the technical sense this might be correct; however, syngamy occurs as a consequence of *first contact,* so it will occur anyway.

The failure to recognize *first contact* as the initiation of the new individual has permitted other arbitrary moments for *individuation.* Thus, the condition of monozygotic twinning (2 individuals split from one fertilized egg) was introduced as a defining moment on individuation and declared to occur on or about 14 days post-fertilization. It was, however, ignored that the known embryological facts stated that 30% of monozygotic twins occur early in development from the first one or two division stages.[17]

Conception, Fertilization and Pregnancy

Another attempt to delay the identification of the new individual (thus, that of new life) may be found in the conversion of the definition of *conception. Taber's Cyclopedic Medical Dictionary* defines conception as: "The union of the male sperm and the ovum of the female; fertilization."[18] *Mosby's Medical Dictionary* also declares conception is equivalent with fertilization.[19] Stedman's 22nd edition medical dictionary defines it as: "*implantation* of the blastocyst in the uterine lining." It says nothing about fertilization.[20] However, Stedman's 26th edition defines conception as: "the act of conceiving or becoming pregnant; fertilization . . . ."[21]

This same edition defines pregnancy as "conception until birth of the baby".[21] Dorland's Medical Dictionary uses two definitions: 1. "the onset of pregnancy, marked by implantation of the blastocyst"; and 2. "the formulation of a viable zygote."[22] Dorland's dictionary is somewhat contradictory in that pregnancy is defined as: "having a developing embryo or fetus in the body."[22] Taber's dictionary defines pregnancy as: "carrying a developing embryo in the uterus."[18] Mosby's Dictionary defines pregnancy as: "the gestational process, comprising the growth and development within a woman of a new individual from conception through the embryonic and fetal periods to birth."[19] From where might such contradictions arise? The following might provide a clue: In Albert Rosenfeld's book *Second Genesis,*[23] in a discussion of chemical contraceptives, a footnote states as follows:

> Because these substances do not prevent the sperm from penetrating and fertilizing he ovum - the classic definition of *conception* - they are not strictly contraceptives. What they do is prevent the newly-fertilized egg from implanting itself in the uterus. Since the intererence occurs after conception, some hold that such practice constitutes abortion. A way around this impasse has been suggested by Dr. A.S. Parkes of Cambridge: Equate conception with the time of implantation rather than the time of fertilization - a difference of only a few days.

Political correctness weaves its way in and out of the science of human embryology!

What Human Embryologists Say

Embryology is the study of development of the new individual from beginning to end. We should, therefore, be alerted as to what contemporary and renowned human embryologists have to say about the beginning of life and the beginning of the human being:

- Moore, Keith L. "This fertilized ovum, known as a zygote, is a large diploid cell that is *the beginning, or primordium, of a human being."*[24]
- Larsen, William J. ". . . gametes, which will unite at fertilization to initate the embryonic development of a new individual."[25]
- Carlson, Bruce M. "Human *pregnancy* begins with the fusion of an egg and a sperm . . . "[26]
- Patten, Bradley M. p.13 "Fertilized ovum gives rise to new individual". P. 43: ". . . the process of *fertilization* . . . marks the initiation of the life of a new individual."[27] Quoting F.R. Lillie: P. 41' ". . . in the act of fertilization . . . two lives are gathered in one knot . . . and are rewoven in a new individual life-history."[28]
- Sadler, T.W. "The development of a human being begins with fertilization."[29]
- Moore, Keith L. and T.V.N. Persaud. "Human development is a continuous process that begins when an oocyte (ovum) from a female is fertilized by a sperm (Spermatozoan) from a male."[30]

- O'Rahilly, Ronan O. and Fabiola Müller. "Fertilization is an important landmark because, under ordinary circumstances, a *new* genetically distinct human organism is thereby formed."[31]

Conversely, it is worthwhile to note that this author has never seen a statement denying the truth of the above. Only when the biological facts have become politicized has there appeared any equivocation.

The Supreme Court of the United States must ultimately come vis-a-vis with the known biological facts of human embryology and admit to the disingenuous interpretation of the beginning of life embodied in *Roe v. Wade* and affirmed in the *Webster* case.

Summary

In summary: The fertilized egg is a living entity, a *human being,* a human *individual,* and, a *person,* all one and inseparable. The reason why this is true is the following:

> from the moment when the sperm makes contact with the ovum, under conditions we have come to understand and describe as *normal,* all subsequent development to birth of a living newborn is a *fait accompli.* That is to say, after that initial contact of sperm and egg there is no subsequent moment or stage which is held in arbitration or abeyance by the mother, or the embryo or fetus. Nor is a second contribution, a signal or trigger, needed from the male in order to continue and complete full development to birth. Human development is a *continuum* in which so-called stages overlap and blend one into another. Indeed, all of life is contained within a time *continuum.* Thus, the beginning of a new life is exacted by the beginning of fertilization, the reproductive event which is the *essence* of life.

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