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Abortion and the Limitations of Science

The Congress of the United States has asked medical science to tell it when human life begins. The very asking of the question by a legislative body, the directing of the question to the field of inquiry known as science, and the answering of the question by scientists indicate a misunderstanding of the appropriate roles and relationships of science and jurisprudence.

Science is only one of a number of valid fields of inquiry, and it must not take on itself the responsibility for providing answers to questions outside its proper realm. Science deals with the prediction and explanation of events in the physical (including biological) world. Far from dealing with absolutes of truth and right, it attempts to construct a hypothetical model of reality which reflects as closely as possible the world perceived by our senses and, when our senses are insufficiently precise, by our instruments.

Life, in a scientific sense, is a hypothetical construct which is valid only to the extent that it aids in accurately conceptualizing the biological world. It is a powerful concept precisely because it has performed that function so well. But life, to the scientist, is not an elemental quality, as were earth, fire, air, and water to the ancients. It is a state of being, a matter of definition, and the line between life and nonlife is not always drawn easily. Is the smallest known virus particle alive?

This same discussion can be applied to any scientific conceptualization or definition, including the definition of human. The scientist, as a model builder of perceived reality, is justified in defining life, and in defining human, and in concluding that within this scientific conceptual model the fertilized egg of a human being is in itself a human life.

Jurisprudence, as a field of scholarship, and legislative action, as one of its practical applications, are concerned with very different sorts of inquiry. Broadly speaking, the law has as its purpose the establishment of a code of conduct to govern the actions of the members of a community in order (at least in our society) to enable them to best live together in harmony. One of the most basic functions of the law must then be to identify those actions which are abhorrent to the community and outlaw them. Thus murder, considered abhorrent by most members of most communities, is widely regarded by the law as the most serious of crimes. And so the law wants science, the definer of life and the definer of human, to tell it when human life begins, so that it may know when to define its ending as a crime.

It must now be clear that the human life of the scientist's perceptual modeling and the human life whose inviolability the law seeks to ensure are coincidentally the same words used in two entirely different conceptual frameworks. The law wants to know if the zygote, embryo, and fetus are human lives because it wants to know if these entities are entitled to the same rights and protections which the community has agreed to confer on human beings who have already been born.

The issue is thus not whether the zygote, embryo, and fetus are human lives in a scientific, definitional sense. The asking of that question is testimony to a profound misunderstanding of the capabilities and limitations of science. The issue is at what stage of development shall the entity destined to acquire the attributes of a human being be vested with the rights and protections accorded that status. It is to the moral codes of the people that the law must turn for guidance in this matter, not to the arbitrary definitions of science. The people are, of course, divided; the separate and combined influences of religious belief, secular morality, personal experience, blind emotion, and even caprice will be felt on all sides of the issue. It will be the difficult task of the lawmakers to create from this turmoil a reasoned and just code of action, but these are the voices which must first be heard. Science may never make moral judgments; the law must. To ask science to define human life in scientific terms for use by the law in moral terms is a travesty of both honorable traditions.—BRIAN G. ZACK, *Department of Pediatrics, College of Medicine and Dentistry of New Jersey—Rutgers Medical School, Middlesex General Hospital, New Brunswick 08903*