To resolve the abortion controversy in the United States, Hans-Martin Sass, a philosophy professor and research fellow at the Kennedy Institute of Ethics at Georgetown University, has proposed a model piece of legislation which provides legal protection to fetuses beginning at about 70 days after conception. The proposal was made public in an interview conducted by the National Catholic Reporter (Dec. 14, 1990, p. 3). The 70-day point was selected because, according to Professor Sass, that is about the time when at least the rudimentary structure of a brain appears and the beginning of its functioning takes place.

According to the published interview, Sass argues that:

We would have the same moral standard and the same legal protection at the beginning of life as we have at the end of life so there would be no double standard in protecting life at the beginning and the end (ibid.).

He goes on to explain his position:

At the end of human life, which we define as brain death, we stop protecting what we consider to be a person—a body with a soul, to use more religious terminology. Prior to a certain stage of embryo gestation (about 70 days after conception, when integrated brain function begins to emerge), there is nothing that would biologically correlate to what we either in religious terms would call the soul, or in more secular terms, the distinct differences of humans as compared to animals like the capacity of reasoning, consciousness, self-consciousness...(ibid.).

A Flawed Argument

His argument, I believe, is seriously flawed. Sass sees a parallel between the end of human life which can be medically determined by several criteria (e.g., permanent cessation of spontaneous breathing and heart beat or by brain related criteria, popularly called "brain death") and the beginning of life when "integrated brain function begins to emerge" (ibid.).

Such a parallel, if any, is at best only superficial. While it is true that total and permanent loss of all brain function signals the death of a born human person, the appearance of integrated brain activity at the beginning of life is not the initial sign of a human person's entrance into this world. A human person has been alive long before the approximately 70th-day alleged demarcation point. From the completion of fertilization onward, evidence shows that there is an organism which apart from accident is uniquely destined to be an adult human person.

But one can legitimately ask how, when we make the brain's functioning essential for personal human life at the end, can we claim that there is a living human person without a brain at the beginning of life? The difference is to be found in an understanding of the brain's role in the life of a human person. Once a functioning brain is present, it is the integrating center for the human organism. Prior to that time, it

(continued on page 2)
Parallel Brain and Organismic Development

During the course of human development, a human life begins at the completion of fertilization when the haploid sets of chromosomes from the sperm and the oocyte (the "egg") match up to form the new diploid (complete) set of chromosomes for the zygote, the new individual. In a single cell organism, the nucleus has that role. During the single cell stage, the nucleus has that role. During the subsequent stages of development, the integrating center is most likely located in the inner cell mass of the morula, (about 4 days after conception) which subsequently gives rise to the tissues of the embryo proper. The brain ultimately derives from the ectodermal germ layer of the embryo which begins to appear by day 20. By day 30, the main regions of the brain have become evident and, by day 48, the embryo already has a recognizable human face with eyes, ears, nose, and mouth. The brain has kept pace in its growth and development.

As the brain appears and develops, its integrating activity becomes more complex. The brain size relates, in part, to the size and complexity of the organism. In other words, the human body-person does not need, and in fact could not support, obviously, an adult brain at the time of birth, and a fortiori at anytime before birth. Rather, there is a proportion between the stage of brain development (as well as other organs) and the stage of the body's overall growth.

The integrating center during the first ten weeks of development increasingly becomes identified with the brain. To function in that capacity does not require that all its circuits be operative. And, in fact, the integrating activity at that stage of development probably involves only the more primitive area of the brain. Furthermore, the integrating activity is most likely mediated by non-neuronal means, that is, by chemical messengers since the nerve networks at the earliest stages are not yet sufficiently developed.

Therefore, in my opinion, any proposed legislation which seeks to make the beginning of a functioning brain the signal for the presence of a human person has failed to understand properly the details of embryological development. Although at the earliest stages post conception there is no brain, the human embryo is already a human organism, a human being, and, indeed, a human person precisely because it is truly an organism of the species Homo sapiens sapiens. No brain, yet personally alive.