Scott Gilbert (Swarthmore) spoke to us about public misconceptions about the science of when life begins. He adapted this talk from an invited presentation he gave at The Vatican in 2007. He raised a number of erroneous “facts” that give people the impression that scientists support the idea that life and therefore personhood begins at fertilization. For example, many people believe that all the instructions for development and heredity are already present in a fertilized egg. More broadly DNA is often presented as tantamount to a “soul” or “essence.” To illustrate this point Gilbert showed us car ads that were predicated on a deterministic concept of DNA. A Toyota, for example, was advertised as having “a great set of genes.” In order to counter this myth, Gilbert described new research from epigenetics and microbiome biology that shows many of our fundamental bodily and behavioral characterizes are determined by the environment, not just by genes.

He also discussed the misconception that an embryo is an autonomous entity and fully protected inside the womb, explaining that for every 20 eggs fertilized only 6.2 become a fetus (at 8 weeks). Furthermore teratogenic compounds threaten fetal development and viability (Gilbert argued that reducing teratogenic compounds in the environment might be a common project for people on both sides of the abortion debate). The popularity of Lennart Nilsson’s photographs of fetuses (actually abortuses) contributes to the misconception that fetuses are autonomous entities by showing them floating outside of a woman’s body. The final myth that Gilbert addressed is that scientists agree when personhood begins; there is, in fact, no such consensus and, he argued that the question of personhood may not be a scientific question at all. However, Gilbert felt that science does have something important to say about embryo/fetus development, which should not be misconstrued in public discourse.

During the Q&A period Jenny Reardon wondered how biologists can participate in debates around abortion and embryo research without calling upon science as the authoritative discourse. I.e. “Science says x, therefore x.” Martha Kenney followed up on this question by asking Gilbert: “If you consider images that are contributing the public discourse about embryo research and abortion to be scientifically misleading, what images do you feel better represents your knowledge of embryos and fetuses that is grounded in your own experience as a developmental biologist.” Gilbert described a “gorgeous” colored MRI image he used for the front cover of his textbook Developmental Biology; he explained that he had to keep telling the publishers to zoom out on the image so that the fetus would not appear to be floating in space. Listening to Gilbert’s passion for this image offered us a way to think out of the “science says” dilemma and into a way of doing a politics of representation from within our professional practices. Donna Haraway commented that a central problem with the abortion debates was that both sides want to ensure that persons were protected from death. She argued that death is not the greatest tragedy and that
we need to learn how to kill well (not just protect life). For Haraway, the politics were not (only) in getting the science right, not only in the images and rhetoric we traffic in, but the ways that entities are protected and made killable within these moral and scientific discourses. The Q&A period opened up Gilbert’s talk beyond the question of what science has to say in the abortion and embryo research debates, to wider questions of representation, ethics, and epistemic authority in a complex social and scientific landscape.