



Biotechnology, Patent Law, Theology

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Institute for Theological Encounter with Science and Technology

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Abstract:

The proceedings from this Fall, 2005 workshop represents one of the more significant meetings ITEST has held over the last 37 years or so. Although each of the twice-yearly or yearly workshops have addressed important issues in science/technology and the encounter with theology, this one reached to “the heart of our being.”

Two essayists presenting the human and animal aspects of the topic asked pertinent questions about experimenting with the human at any level of development. One asked if human biological engineering is good for us; whereas, the other put into perspective the state of the art by succinctly defining the “true embryonic stem cell.” A third essayist presented an opposing view: that “harvesting stem cells from somatomes, the constructs of research cloning, cannot kill embryos because there are no embryos.”

The plant biologist questioned the driving force behind genetic investigations in the areas of food production, among them genetically modified food (GMF). Who is doing the research and why? Is the motive altruistic: to feed a starving population, perhaps, or is it selfish: to feed the hunger of individuals or corporations greedy for profits.

The patent lawyer deftly cut through the perceived arcane language of law thus revealing a treasury of logic describing the requirement for patentability: it must be new, useful and non-obvious. Although the “hot discussion topic” for this workshop focussed on stem cell research (adult and embryonic), patent law and its effect on biological experimentation was present as a subtext throughout.

Finally, the essay on theology concentrated on the human as the image of God. What do we mean by that phrase “the image of God” and as such are we free to manipulate that image by genetic experimentation. Are there aspects of our nature that are both “touchable” (able to be manipulated) and “untouchable” (sacred to the concept of “in God’s image”). Maybe Are there some aspects of our nature that are “touchable” (acceptable to manipulate) and others that are “untouchable” (part of “in God’s image” and thus sacred), and if so, which are which?

This volume also includes the tightly edited six plenary discussions sessions

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Foreword:

There is a continuing revolution in our knowledge of and control over the human body and its faculties. Debate about [and actual experimentation on or leading to] areas like embryonic stem cells, cloning, artificial chromosomes pharmacogenomics, chimeras and other strange sounding terms, increases. Considering the scientific, ethical and policy complexities that confront every society in its attempt to understand and choose how best to employ developing technologies, the question of what is best comes to the fore.

Plant genetics and animal research do not present the same type of problems presented by human embryonic stem cell research and cloning. Although there are ethical and legal concerns over specific plant and animal experimentation and application, by and large plant animal research are not seen to be destructive of human life. That is not true of human embryonic stem cell research or forms of human therapeutic cloning. This is an important debate in the bioethics and legal communities. In the scientific community the attitude toward this work is generally “full speed ahead.”

Biological research in general is raising important questions concerning law in general and patent law in particular. In a December 9, 2003 [citation, link] internet listing it was stated that “a little noticed House of Representatives vote on patent law may prove to be a profound victory for the fight for the Culture of Life in the United States.” On December 5, 2003 Science reported: “Congress has moved to cement into law U.S. Patent and Trademark Office (PTO) rules that bar the agency from issuing patents on ‘human organisms’. But researchers are relieved that lawmakers have made it clear that the ban won’t apply to stem cells derived from human embryos.” Where does the debate on embryonic stem cells and patenting of human organisms stand today?

What does the theological community and the Church advocate as the sciences move more and more toward the central questions of what it means to be human. What are the essential characteristics of human nature? We have dealt with this topic in many of our workshops but we keep returning to it because it is so fundamental to the life of the nation and of Christianity. How should society respond? How should the Christian churches respond? Is there common ground?

Our director, Father Robert Brungs, SJ, wrote the foregoing paragraphs on the invitation to this workshop: *Biotechnology, Patent Law and Theology*. How did those reflections take shape in the essayists’ papers and become flesh during the weekend deliberations of the participants? As Father Brungs might say, “I simply ask the questions and set the tone of the workshop; the Spirit usually decides if the participants follow my thoughts or take the discussion in new directions.”

Let’s start with the essayists:

Dr. Randall Prather, University of Missouri-Columbia, began by explaining the process of nuclear transfer cloning in pigs, his prime area of research, noting that the technique he illustrated works mainly the same way in many other species. Since the media has been rife with often misleading reports on “stem cell” research and the proposed benefit to people suffering from as yet incurable diseases, Prather put into perspective the state of the art by precisely defining the “true embryonic stem cell.” To show that not all the promises of cures lie in embryonic stem cells, he mentioned the possibility of using skin-derived stem cells while citing a breakthrough from scientists in Korea reporting some success with umbilical cord stem cells to restore feeling and mobility to a spinal cord injured person.

Brendan Niemira, with the USDA, posed certain questions about genetic investigations in the areas of food production. First of all he asked, Who is doing it? Why are they doing it? And what is the driving force behind much of this new research in plant biology? The discussion following those questions engaged the essayists and participants as they also applied these questions to the areas of human and animal genetic research.

Fr. Kevin Fitzgerald, SJ, Georgetown University, also started with thought-provoking questions: “Can human biological engineering be good for us?” There is no simple answer to that question since we must ask, “What is a human being?” What is “the good”? The discussion became quite lively when a disagreement arose over the whole question of defining an embryo. Since the definition of an embryo may not be the same for everyone, Fitzgerald urged caution in using language which can have different connotations in different venues.

Dr. Rudy Brun, Professor Emeritus, Texas Christian University, presented an opposing viewpoint. His topic, “Harvesting Human Stem Cells: Therapeutic versus Reproductive Cloning”, led the essayists and participants to voice serious differences of opinion, based on their experience of current scientific research and the position of the Catholic church on the question of what constitutes an embryo, and whether or not it may be considered to have all the rights and privileges of a human being. While agreeing that reproductive human cloning is not acceptable, Brun contends that “harvesting stem cells from somatomes, the constructs of research cloning, cannot kill embryos because there are no embryos.” (Brun).

David Saliwanchik, Esq., guided the group through a description of the steps necessary for patenting biological materials while remarking that technology has advanced a lot since he addressed an ITEST workshop on the same topic in 1996. He dispelled some of the uneasiness people might feel when they hear about patenting micro-organisms or genes or mice and so on, by explaining what a patent really is and what rights and obligations a patent accords to the holder. Further, he made intelligible the often arcane language of the law by using examples to speak about the requirements of patentability: it must be new, useful and non-obvious. Although the “hot topic” of this weekend centered around embryonic stem cell research and new techniques now being used to extract stem cells, patent law was a frequent sub-text running close to the surface and present in the scientific, theological and philosophical probings.

Father Joseph Murphy, SJ, Professor of Moral Theology at the Josephinum, had the task of bringing theological and philosophical insights to the areas of science, technology and law. Using as his spring board “Genetic Manipulation and the Image of God”, Murphy noted the difference between the “touchable” and the “untouchable” -- things that can be manipulated and things that can’t. Basically he emphasized that with genetic manipulation, the sacredness of the human being as the image of God must be the guiding principle. What does it mean to be human and how to describe the human being are questions theologians and popes have addressed in detail over the centuries. In one short weekend, however, the participants at this workshop added their insights from sometimes varying viewpoints to the volume of material available.

Although vigorous discussion followed the presentations and disagreement was often voiced, the input always occurred in the spirit of respect and courtesy -- a hallmark of the ITEST workshops and conferences over the past 38 years. Readers of this volume may imbibe the spirit of the weekend by reading not only the essays that follow but by immersing themselves in the edited discussions. Enjoy!

As Father Brungs wrote in the last book of proceedings, “I recommend the results to you all.”

Marianne Postiglione, RSM
Director pro tem of ITEST
May 31, 2006