



Symposium title: The Quandaries of Biotechnology: Theory and Practice

Symposium abstract:

How are new developments between biotechnology and big data including gene editing, brain-computer interfacing, and artificial intelligence changing our vision of what it means to be human? How does this bear in the ethical practices of medicine and research at the lab bench and at the bedside? How might an integrative vision of ethics contribute to this conversation? Are there alternative social imaginaries in which we can think about different technologies?

In this day-long spring symposium, scholars from the University of Chicago and the Chicagoland area are invited to discuss how biotechnology is shaping anthropology and whether the application of new biomedical technologies reflects an adequate understanding of human personhood.

This event will be open to the public and seeks to engage particularly with current students, faculty, and medical practitioners interested in the intersection between science, medicine, technology, and theology. Publication of this program's proceedings is a possibility. Participants are invited to return for a second symposium in fall 2024 on biotechnology and artificial intelligence.

Schedule:

Friday, March 22, 2024

1 – 2 p.m.: Session 1 (Kyle Karches and Stephen Meredith)

2 – 2:30 p.m.: Session 1 Q&A and Discussion (moderated by Jeffrey Bishop)

2:30 – 3 p.m.: Break 1

3 – 4 p.m.: Session 2 (Lesley Rice and Silvianna Aspray-Buerki)

4 – 4:30 p.m.: Session 2 Q&A and Discussion (moderated by Jeffrey Bishop)

4:30 – 5 p.m.: Break 2

5 – 6 p.m.: Keynote speaker (Paul Scherz)

Session 1:

Presenter: Kyle Karches

Bio: Kyle E. Karches, MD, PhD is Associate Professor of Internal Medicine and Health Care Ethics at Saint Louis University. He holds an MD from the University of Chicago and an interdisciplinary PhD in Health Care Ethics from Saint Louis University. He practices primary care and hospital medicine.

Title: Medicine Within the Technological Enframing

Abstract: Physicians and ethicists who express concern about technologies such as AI in medical practice often seem to presume that these technologies threaten to encroach on a medical space that is not currently technological. Yet in this paper I will argue that modern medicine has already constituted itself as essentially technological, when “technology” is understood according to the critique of technology made by Heidegger and others. I will illustrate this point by describing several practices already widespread in contemporary medicine. Many physicians already feel like cogs in a machine, with their clinical judgment constricted by economic and policy measures that direct their attention away from the individual patient’s good. The health care system also frequently treats patients as raw material, subjecting their bodies to various forms of power and extracting resources from them, as evidenced by the recent expansion of normothermic regional perfusion (NRP) to obtain organs for transplant after cardiac death. With this paradigm in place, any technologies on the horizon represent not revolutionary threats to traditional practice, but rather logical extensions of what medicine has already largely become. It will therefore be difficult to resist the adverse consequences of these technologies that medical practitioners fear.

Presenter: Stephen Meredith

Bio: Stephen C. Meredith is Professor at the University of Chicago in the Departments of Pathology, Biochemistry and Molecular Biology, and Neurology, and is associate faculty in the Divinity School. Using the left side of the brain, he published more than 100 journal articles on the biophysics of protein structure, especially on amyloid proteins associated with Alzheimer’s Disease. With the right of the brain, he also published articles on literature and philosophy, especially in medical humanities and bioethics. His teaching in the humanities includes courses on James Joyce, St. Thomas Aquinas, Augustine, Thomas Mann, and Dostoevsky’s *Brothers Karamazov*. He is currently completing a book, *Disease and the Problem of Evil*.

Title: The Grand Inquisitor, Mustapha Mond, and the Attack on the Transcendentals

Abstract: Aldous Huxley explicitly modeled the character of Mustapha Mond, resident World Controller of Western Europe, in *Brave New World*, after Dostoevsky’s Grand Inquisitor in

The Brothers Karamazov. Both novels address the possibility that attempts to rationalize happiness completely can lead to misery or dystopia rather than happiness / utopia. In this talk I will discuss a commonality of both characters: their central philosophy constitutes an attack on the transcendentals. Transcendentals can be defined briefly as universal properties of all being (i.e., *ens commun*). As such their philosophies also aligned, explicitly or implicitly, with atheism. Do their philosophies somehow foster dystopia, and if so, how – or if not, why not? In discussing the theme of transcendentals and the related theme of substantial and accidental forms, I will consider two types of ectogenesis: one based on *L'Homme Machine* (and its product, cloning), and the other based on the Homunculus (and its product, transhumanism).

Session 2:

Presenter: Lesley Rice

Bio: Lesley Rice received her doctorate in theology from the Pontifical John Paul II Institute with a dissertation on contemporary Catholic thought concerning biotechnology and the beginning of life. Her research concerns the history and philosophy of biology, the character of biological knowing, and the cultural and anthropological significance of biotechnologies. Her work has been published in *Communio: International Catholic Review*, *Anthropotes: Rivista di Studi sulla Persona e la Famiglia*, and *Humanum: Issues in Family, Culture & Science*.

Title: Our Biotechnologies, Ourselves: Reflections on Innovation, Identity, and Culture

Abstract: The Canadian philosopher George Grant said that the question of technology is too momentous in human history to say "I'm for it" or "I'm against it." Technology, he said, is ontology in the contemporary world; it mediates reality to us. What does this mean concretely for our self-understanding and our common life? A passage in Pope John Paul II's encyclical on economics, *Centesimus annus*, offers a vantage point from which to consider Grant's insight. Here, the Pope states that the human person is not a mere homo economicus, but rather is best understood in view of universal experiences: birth, death, love, and work (no. 24). This paper aims to examine these inter-related experiences in view of the technological conditioning that suffuses them today by examining several bioethical questions at the beginning and end of human life, particularly those that emerge from reproductive technology and organ donation--the first of which (in its most common forms) the Catholic Church has a clearly articulated teaching against, and the second of which she has promoted. Drawing not only on Grant and John Paul II but also on the contributions of Ivan Illich, Daniel Callahan, and Leon Kass, we will consider the meaning of finitude, agency, and suffering and the influence of technology on each of these, and hence on ourselves and our destinies.

Presenter: Sylvianne Aspray

Bio: Sylvianne Aspray (PhD, University of Cambridge) works at the intersection of theology and the history of ideas. Her research, currently funded by the British Academy, concerns the origins and genesis of modernity, and the role of Christianity therein.

Title: Beyond Ethics: A Humanities Perspective on (Bio)technology

Abstract: TBA

Keynote speech:

Presenter: Paul Scherz

Bio: Paul Scherz is Associate Professor in the Department of Religious Studies at the University of Virginia. He is the author of *Science and Christian Ethics* and *Tomorrow's Troubles: Risk, Anxiety, and Prudence in an Age of Algorithmic Governance*. He is currently working on projects on AI ethics and the ethics of precision medicine.

Title: Populations, Persons, and Precision Medicine: The Ethics of Emerging Information Technologies in Genetics and Medicine

Abstract: Recent innovations in biotechnology rely upon the concept of the population. Precision medicine stratifies populations into risk groups; genomic technologies like the polygenic risk scores used in prenatal testing draw on population genetics.; AI's statistical methodologies generate population-level predictions; and even some efforts at gene editing aim at population-level effects like CRISPR-mediated knockdown of PCSK9 for lowering cholesterol. For these reasons, many institutions are combining ideas of precision medicine and population health in programs for Precision Population Health. This emphasis on the population in biotechnology both exemplifies and reinforces a change in the philosophical anthropology at play in medicine. The new anthropology no longer emphasizes the mechanistic understanding of an individual patient's body so criticized by prior generations of bioethicists. Yet, neither does it foreground a holistic, narrative understanding of the patient as a person. Instead, a patient is envisioned as a member of a population. There are many benefits to this approach: a more social understanding of medicine, some valuable technologies; and better tools for validating therapies, it creates its own dangers. Yet by dissolving the individual patient into quantitative statistics, this paradigm creates its own dangers to both patients who are a threat to population metrics and medical practitioners confronting health system bureaucracies that use population metrics. This talk will describe this anthropology, examine the sources of this anthropological shift, discuss its effects on biotechnology and medicine, and explore its ethical implications.

This event was made possible through the support of 'In Lumine: Supporting the Catholic Intellectual Tradition on Campuses Nationwide' (Grant #62372) from the John Templeton Foundation. The opinions expressed in any publications, videos, lectures, etc. associated with this project are those of the author(s) or speaker(s) and do not necessarily reflect the views of the John Templeton Foundation.