

**The Canadian Centre for Ethics in Public Affairs and Situating
Science present:**

Trust in the New Sciences: Remaking the Human

Part 1: Engineering Selfhood in the 21st Century

October 13th, Halifax
University of King's College

Dr. Nikolas Rose

Director, BIOS Centre
London School of Economics

Are we on the verge of an age when we can re-engineer the human being at will and according to our own human designs? Does 'nature' no longer set the limits on what kinds of persons - with what kinds of minds and bodies - we can become? We should beware speculation and hubris. But something is happening as advances in biology and biomedicine open our vital processes to a molecular gaze, and re-render life as mechanism. At the same time our hopes and fears about how we should live have come to centre upon a sense of ourselves as embodied - and embrained - individuals. Biomedical experts have become central to the management of our lives, repositories of trust and distrust, hope and disappointment. In this lecture, taking examples from biomedicine, genomics and neuroscience, I will consider the implications for the ways we understand and govern ourselves and the new dilemmas of rights and obligations that confront us.

**Part 2: Science Friction: Personalized Genomics and the Future of
Medicine**

Jan 26, Vancouver
University of British Columbia

Dr. Michael Hayden

Canada Research Chair in Human Genetics and Molecular Medicine
University Killam Professor, Department of Medical Genetics

Dr. Anita Ho

Assistant Professor, W. Maurice Young Centre for Applied Ethics, UBC Director, Ethics Services,
Providence Health Care

**Part 3: Nanomorphosis: The Future of the Body in the Age of
Nanotechnology**

March 2, Toronto
University of Toronto

Dr. Colin Milburn

Associate Professor, Department of English and Program in Science & Technology Studies
University of California, Davis

We often hear that nanotechnology will soon transform everyday life--including the human body itself. This lecture will examine the technical claims and the speculative visions currently attending to the impact of nanotechnology on human biology. By focusing on

the work of specific researchers involved in some of the most ambitious programs for augmenting or altering human biology at the molecular level, we will begin to better understand the pivotal roles that speculation and futuristic visions play in guiding the evolution of the new sciences. Moreover, we will begin to see ways that we might proactively intervene in the radical remaking of the body under the regime of nanotechnology--a process that we might call "nanomorphosis."

Part 4: Mind the Gap: The Neurosciences and Their Determination to Explain the Human

March 11, Montreal
McGill University

Dr. Cornelius Borck

Professor and Director, Institute for the History of Medicine and Science Studies
University of Lübeck, Germany

Understanding the brain and the biological basis of mind, consciousness and behavior is the ultimate challenge. It stimulates researchers to look into the brain with ever more sophisticated technology such as functional neuroimaging. This colourful visualization of mental processes in the living human brain enthralls scientists and the public alike.

The neurosciences have made enormous progress over the last decades and provide ever more fascinating insights into our cognitive as well as emotional and social operations. While some hail this as the imminent advent of a definitive understanding of our mental apparatus and conclude we should align our social institutions with coming neuroscientific evidence, others warn against a brave new world of thought control, mind reading and manipulation.

Rather than debating the value of particular insights from the neurosciences, this talk will look at the incredible dynamics of pushing our theorizing about the mind in new directions while opening more ways for intervening into the brain. Currently, nature and culture coalesce in this field of research without reducing one to the other. Are we witness to the opening of a new chapter in the human evolution?

Part 5: Genes, Genomics and Human Nature

April 1 - Edmonton
University of Alberta

Halifax (reprise)

University of King's College

Dr. Evelyn Fox Keller

Professor Emerita, History of Philosophy of Science, Program of Science, Technology and Society, MIT

Respondents: Tim Caulfield, CRC, joint position in Law and Public Health
Robert A. Wilson, Professor, Department of Philosophy, University of Alberta

Talk about the role of genes in human nature has been plagued by several kinds of linguistic uncertainty ever since the origin of genetics. When the word gene was first

introduced in 1909, it served as little more than a place marker, a name for the presumed unit of inheritance. But one source of confusion, conflating genes and mutations, set in at the very start. What is a gene? A gene is a difference maker. Yet virtually all geneticists also assumed that genes are trait makers. To this day, conflation between genes and mutations, between trait makers and difference makers, remains endemic. To be sure, the meaning of the term gene has undergone many transformations over the course of the century, not to mention proliferation. Furthermore, the status of genes as trait makers has come under severe challenge, as has the status of genes as difference makers. But it is the confusion between the two, and the place of that confusion in our understanding of human nature, of what is natural and what is unnatural, that will be the topic of my lecture.