Statement by Prof. Roger STRAND

I would like to begin by commending and expressing my gratitude to the Academy for organizing the workshop with a title that is both timely and to the point: "Converging on the Person. Emerging Technologies for the Common Good". In my statement today, I shall reiterate some of the key messages in my lecture at this workshop.

The term "converging technologies" denotes a set of technoscientific domains and their outcomes. This set typically includes biotechnology and molecular life science, including systems and synthetic biology, then also nanotechnology, informatics and information and communication technologies or ICTs, neurotechnology and cognitive science, and sometimes robotics and mechatronics. The idea of convergence relates to technological applications that cross these domains but also to the scientific ambition of connecting and integrating the underlying scientific bodies of knowledge. Ethical issues include the risk of misuse and abuse of such technologies. Furthermore, there are questions about access, social justice and sustainability. And more fundamentally, converging technologies raise issues about the future of the human species if the understanding comes to prevail that the human body and mind is just an arbitrary collection of genes, cells and tissues where everything might be changed according to our own desires.

My main message overall is that converging technologies and the ethical issues that they raise, are linked to structural features of contemporary modern societies and should be addressed as such. Neither science nor technology emerges in a vacuum but is co-produced with the society in which it takes place. Science and technology shape and are shaped by other institutions and practices, such as politics and economics. The ethical issues of converging technologies are entangled with the political economy of technoscience, with political agendas of innovation and economic growth, and with market forces and ideologies and cultures of materialism and consumerism. They are entangled with what the Encyclical *Laudato Si'* rightly called the technocratic paradigm.

This is also why ethics in the sense of guidelines and committees struggle to cope with the challenges. That is to say, our ethics institutions do contribute to better protection of research subjects and their right to privacy, integrity and dignity during the research process. They can prevent harms from taking place during the research process itself. However, the space for ethical deliberation is mainly limited to the duration of the research project, and not to the societal implications of the outcomes of the research. *Ethics review boards are not able to govern science and technology towards the common good.* Current practices of research ethics play regulative and not constitutive roles.

To steer our technological trajectories towards the common good, we accordingly have to go deeper. There is a need to supplement the dominant visions and imaginaries of the good technological future with more voices from the peripheries of current scientific and economic elites. There is a need to challenge the technocratic paradigm and better integrate the concerns for human identity, dignity and flourishment.

I believe that we should not ask for quick fixes; indeed, the desire for control and for a quick fix belongs to the technocratic paradigm. It is part of the problem. It may take generations for societies to acquire the wisdom to govern technoscience for the common good.

Within academia, we can improve our ways to describe what so far escapes the technocratic paradigm. Medicine and health science can become sensitized to a wider range of meaning, including the spiritual dimension. We could build a science for human flourishment.

This might be easier than some expect. A lot of knowledge is already there, also outside the scientific, economic and political centres of power. We could listen better to peripheral voices, or even better, they might become louder. And they might become stronger, for a number of reasons, including that the functioning of the sophisticated technologies that we are discussing, depend on the functioning of expensive infrastructures and heavy use of natural resources. Some problems of the rich may simply disappear by themselves, especially when our societies are so extremely unsustainable.

The world of converging technologies is reminiscent of a Brave New World, not necessarily totalitarian but totalizing in its discourse. In the long term, I believe in moral progress. The path may be long and winding, though, especially if critique and dissent fade away. Windows to different perspectives should not be closed. We should continue to ask how technology may converge on the person, and insist on conceiving the person as more than an isolated individual, a subject that only controls or is controlled, disconnected from everything that is larger than oneself, in blind suspense between Heaven and Earth. We should ask at every crossroads: Can this or that sociotechnical trajectory help us remember how our lives truly can be, and support our strength to live them?