



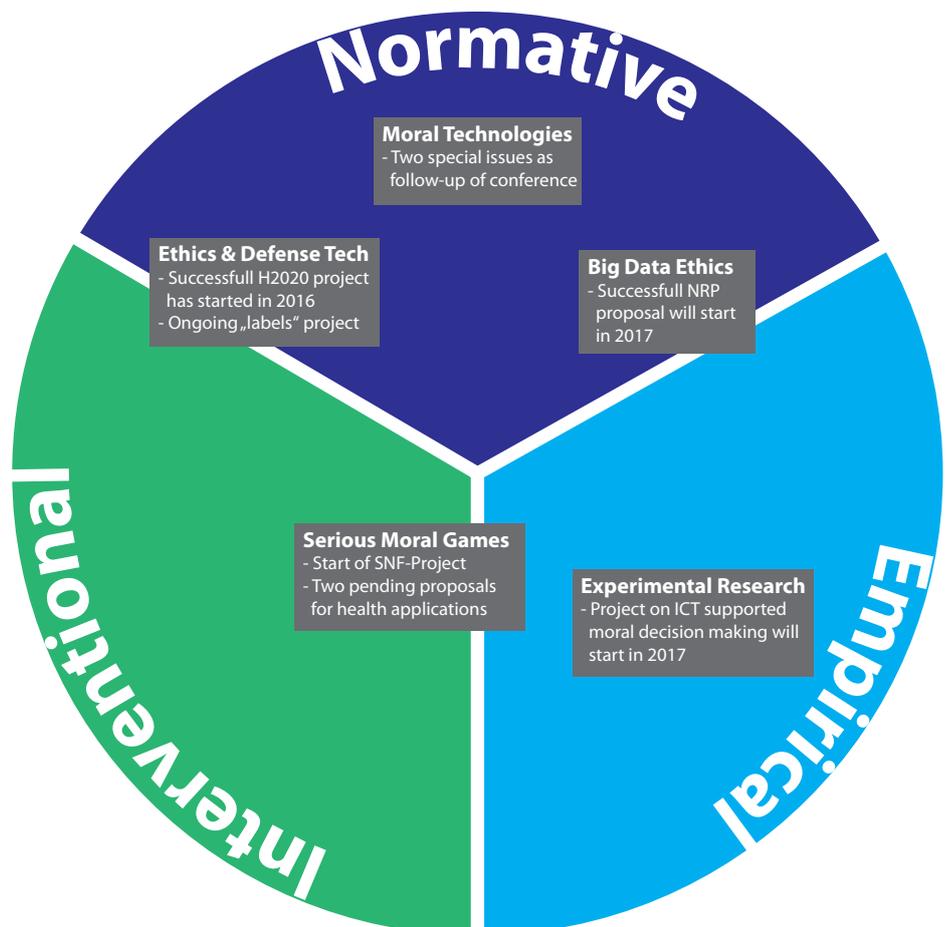
The research network “Ethics of Monitoring and Surveillance” (NEMOS) investigates moral consequences of ICT systems that record, accumulate and analyze information on human behavior to allow for specified social interventions. Within NEMOS, normative questions on the legitimate use of such ICT based monitoring and surveillance and empirical questions regarding their impact on human moral psychology are investigated. This report provides an overview on the activities within NEMOS in its third and final year.

NEMOS aims to build up a research network within three years; the focus of the third year (2016) was to consolidate successful research strains and to ensure that the research topics developed within NEMOS can be continued in a long-term environment.

NEMOS 2016 achievements in a nutshell:

- Successful application of the Horizon 2020 project **CANVAS**: Constructing an alliance for value-driven cybersecurity.
- Successful application of the National Research Programme **Big Data** project „Between Solidarity and Personalization – Dealing with Ethical and Legal Big Data Challenges in the Insurance Industry“.
- Successful application of the research project „**Labels for the Ethical use of Autonomous Robotic Systems in Security Applications**“ funded by Armasuisse Science + Technology.
- In total **five out of six** research strains have been consolidated and funding for continuing research has been secured for four strains.

In 2017, NEMOS relocates to the Institute of Biomedical Ethics and History of Medicine and becomes the Neuro-Ethics-Technology (NET) research group; the NEMOS coordinator has become the managing director of the UZH Digital Society Initiative; which serves as a larger framework to embed the research activities of NEMOS.



The Future of NEMOS

In December 2016, the University Research Priority Program Ethics, who provided the framework of NEMOS, expired. In the three years of its existence, eight successful grants (as main or co-applicant) have been created in the context of NEMOS with a total sum of 2.9 Mio. CHF; the largest three projects concern ethics and cybersecurity (Horizon-2020-project CANVAS), the ethics of Big Data in the insurance industry (an NRP project) and the project on moral sensitivity enhancement (a Swiss NSF project). The creation of the „Digital Society Initiative“ of the University of Zurich (www.dsi.uzh.ch) now provides the new framework of the NEMOS research projects; whose new institutional homebase becomes the Institute of Biomedical Ethics and History of Medicine.

Moral Technologies

Aim: To investigate conceptual, scientific and normative questions of intervening in a non-explicit way into moral behavior using pharmacological, psychological and technological means.

Collaborators: Among others: Mark Alfano (Delft University of Technology), Darcia Narvaez (University of Notre Dame), Jeroen van den Hoven (Delft University of Technology), Roberto Weber (University of Zürich).

Initiatives 2016:

- Realization of the 2016 Moral Technologies conference (Centro Stefano Franscini)
- Preparation of two Special Issues in the „Journal of Moral Education“ and the journal „Ethics and Information Technology“ (to appear in 2017/2018).

Ethics and Defense Technologies

Aim: To advance the understanding of ethical issues in future defense research & technology and procurement.

Collaborators: Among others: Neil Davison (ICRC), Don Howard (University of Notre Dame), Quentin Ladetto (Armasuisse), Wilbur Scott (US Air Force Academy), John Sullins (Sonoma State University) and Mariarosaria Taddeo (University of Oxford).

Initiatives 2016:

- Successful H2020 Proposal for DS-7-2015 on Cybersecurity.
- Successful proposal „Labels for the Ethical use of Autonomous Robotic Systems in Security Applications“ funded by Armasuisse Science + Technology.

Ethics of Big Data

Aim: To increase the understanding of the ethical impact of Big Data in research and applications with respect to core values like autonomy, privacy, fairness and responsibility.

Collaborators: Among others: Christian Hauser (University of Applied Sciences Chur), Rolf Weber (University of Zurich), Stefan Weiss (Swiss Re), and members of the Ethics Advisory Board (EAB) of the Human Brain Project (HBP).

Initiatives 2016:

- Successful proposal for a NRP project on the ethics of Big Data in the insurance industry (to be started in 2017).
- Finalization of the SATW Big Data project.
- Several public talks on the ethics of Big Data.

The role of ICT in Humanitarian Work

Aim: To analyze the role of ICT and new media use for supporting the work of humanitarian organizations in war and disaster zones with a particular focus on ethical problems and dilemmas.

Collaborators: Among others: Matthew Hunt (McGill University) and Christian Rouffauer (International Committee of the Red Cross).

Initiatives 2016:

- Both proposals resubmitted in 2016 failed again; this research strain has been abandoned.

Research on moral effects of ICT

Aim: To experimentally investigate how the digital visualization of morally relevant information impacts moral reasoning and decision making with a particular focus on using „drones“ and visual displays.

Collaborators: Among others: Chuck Crowell & Mike Villano (both University of Notre Dame), Sara Fabrikant (University of Zürich).

Initiatives 2016:

- The NRP submission on visualizing high ethical valence data to improve moral decision-making failed; a follow-up project is in preparation.
- A research project on ICT supported moral decision making has been prepared and is planned to start in 2017.

Serious Moral Games (SMG)

Aim: To create video game based tools that allow to analyse mechanisms of moral behavior and to train moral competences. This includes normative investigations on the legitimate use of such tools in practical contexts (e.g.: Business and Medicine).

Collaborators: Among others: Ulrich Götz (Zürich University of the Arts), Ralf Mauerhofer (Koboldgames), Carmen Tanner (University of Zürich & Zeppelin Universität).

Initiatives 2016:

- Start of successful SNF project application on moral sensitivity enhancement in February 2016
- One additional submissions to SMG applications in the health domain have been submitted (decision in 2017).

NEMOS Statistics 2014-2016

Collaborators: 2 PhD students
6 master students

Papers related to NEMOS: 13 have been published
5 have been submitted

Workshops: 2 in 2014
2 in 2015
1 in 2016 (conference)

NEMOS grant proposals: 13 in total were successful
10 in total failed

Talks: 3 in 2014
8 in 2015
8 in 2016