Do we need the recognition of neurorights? The scope of State and business actors' human rights obligations in the area of neurotechnologies

The overarching aim of the project is to determine the existing State and business actors' human rights obligations in the area of neurotechnologies and assess whether recognition of new human rights is essential to adequately protect individuals from the unintended consequences of the application of such technologies.

The term 'neurotechnologies' refers to devices and procedures used to access, monitor, investigate, assess, and/or manipulate the structure and function of neural activity (OECD 2019). They provide unique **opportunities for the enjoyment of human rights**. Brain-computer interfaces (BCIs), which connect the nervous system and a computer, are described as the most important technological breakthroughs in decades for disabled persons. BCIs enable persons with paralysis to communicate again or operate with robotic arms. Better access to neural data will inevitably lead to a better understanding of brain structure and function. This is of utmost importance for preventing and treating brain disorders (e.g., addictions, anxiety, migraine), which account for 23.4% of the burden of disease in Europe.

At the same time, neurotechnologies, like any other technology, can also be **abused**. Several governments expressed interest in developing neurotechnologies for military purposes. For instance, the UK Ministry of Defense (2021) foresees progress in enhancing memory and the possibility of 'installing' new skills. Brain images can be used to infer individual thoughts, which challenges the inalienability of mental privacy (UNESCO 2021). Brain data will also be inevitably brought to the courtrooms. In *R v Lepore* (2013), the Australian court modified a sentence after hearing expert evidence based on brain scans. This project seeks to spell out conditions and restrictions for applying neurotechnologies in compliance with international human rights law.

An increasing number of scholars call for the **recognition of neurorights**, such as the right to mental privacy, the right to equal access to mental augmentation, or the right to protection from algorithmic bias. These claims laid down the grounds for the resolution on neurotechnologies and human rights adopted by the Human Rights Council in 2022. Nevertheless, some scholars argue that the proclamation of neurorights would be premature. This project aims to verify whether existing legal framework has the potential to adequately address challenges posed by the neurotechnologies.

The project adopts an interdisciplinary perspective including neuroscience, ethics, data science, and international human rights law. The analysis of international human rights law is primarily based on UN treaties, UN Guiding Principles on Business and Human Rights, and documents adopted by UN treaty bodies. The project will also explore the developments in the area of Artificial Intelligence (AI) as well as business and human rights. The **business perspective** is essential as the private sector is increasingly driving scientific progress and influencing the enjoyment of human rights. Nevertheless, the scope of business obligations derived directly from human rights treaties remains controversial. On the other hand, the **AI perspective** is required to embed the postulated neurorights in the dynamically changing legal context. International human rights law is witnessing significant developments due to the emergence of AI. In 2021, the European Union proposed an AI Act while the Council of Europe launched the process of drafting a Convention on AI. Other instruments were adopted by OECD (2019) and UNESCO (2021). These regulations address some of the challenges posed by neurotechnologies. Thus, integrating an AI perspective is essential to reliably answer **whether – and if so, which neurorights should be proclaimed**.