The future of philosophy is transdisciplinary

- Professor Nayef Al-Rodhan of St Antony's College, Oxford, and the Geneva Centre for Security Policy, Switzerland, talks to us about neuro-techno-philosophy, transdisciplinarity, and his hopes for philosophy's future.
- Through several publications, he has pioneered the application of neuroscience to the analysis and conceptualisation of trends in contemporary geopolitics, global security, national security, transcultural security, and war and peace.
- By better comprehending ourselves and the nature of our minds, we can make collective progress in peace, security, knowledge, and prosperity.

Philosophy and science have always striven to make sense of the world. So why do we continue to treat them as fundamentally distinct disciplines? In 'Transdisciplinarity, Neuro-techno-philosophy, and the Future of Philosophy', a recent open-access paper published in the prestigious journal *Metaphilosophy*, Professor Nayef Al-Rodhan argues that if we wish to understand and engage with game-changing technological innovations, philosophy must give neuro-techno-philosophy (NTP) a central place in its future. But what are transdisciplinarity and NTP, and why do they matter?

Transdisciplinarity

When we speak of interdisciplinarity, we typically imagine colleagues across two or more disciplines collaborating on a joint project that emerges out of the combination of discipline-bound building blocks. *Trans*disciplinarity, by contrast, seeks to do away with the notion that, at its most basic level, all knowledge and understanding must be based on a single discipline. NTP is a particular form of transdisciplinarity involving neuroscience, technology, and philosophy, transcending any division between the humanities and STEM subjects. According to Al-Rodhan, individual researchers should be trained to conduct transdisciplinary research, including NTP.

Neuro-techno-philosophy

While NTP is not the only transdisciplinary research worth pursuing, it is one of the most important areas of study because it brings together global priorities that arise from a host of innovations relating to artificial intelligence, consciousness, and geopolitics. Neither science nor philosophy are equipped to handle their repercussions alone. The introduction of neurophilosophy in the 1980s (a term coined by Patricia Churchland in 1984) successfully demonstrated how a naturalised picture of human nature can transform traditional philosophical questions previously believed to be answerable from the armchair. In the decades that followed,

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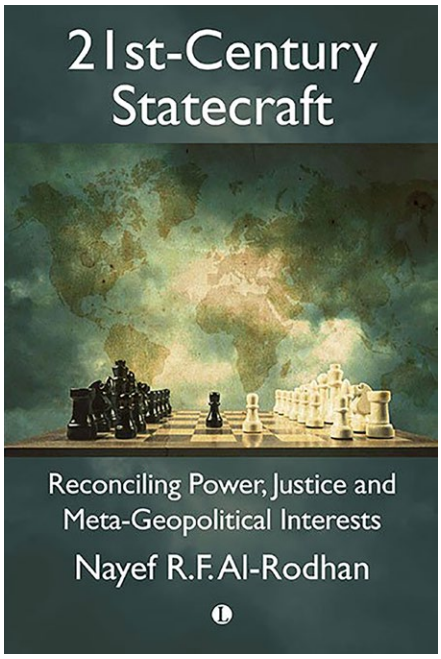

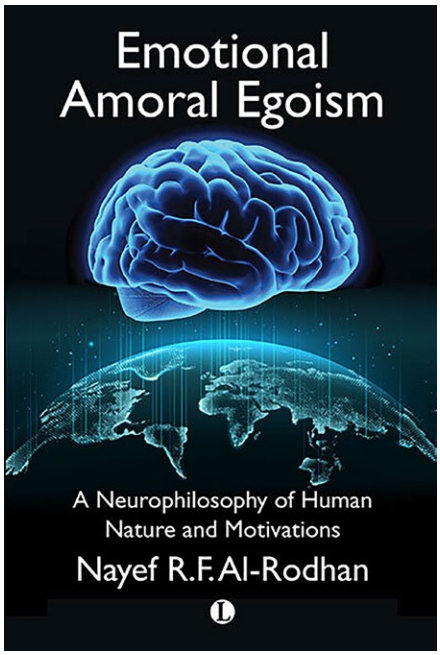

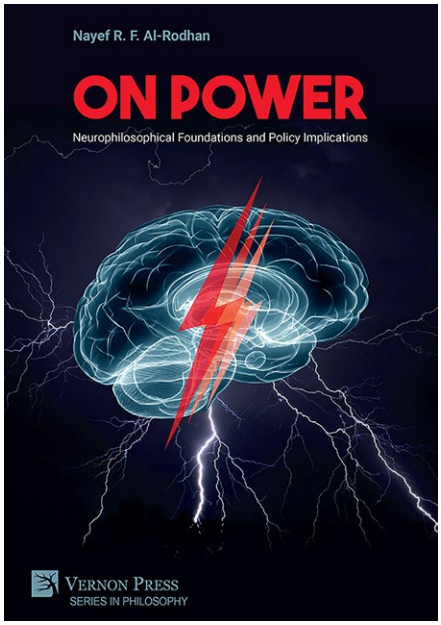

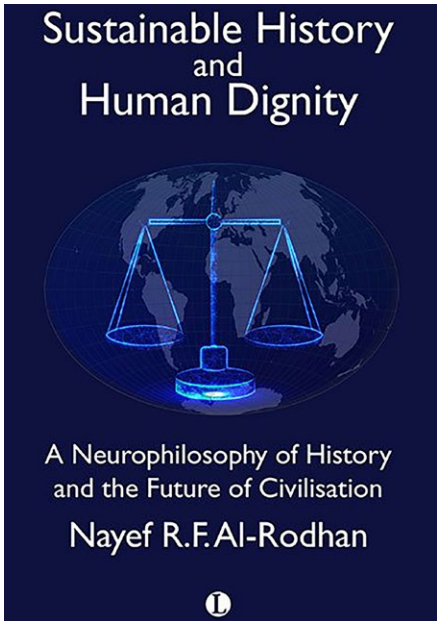

Nayef Al-Rodhan has written 25 books and more than 300 articles.

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neurophilosophy completely transformed the way we think about moral judgements, innate moral instincts, the possibility of altruism, and the purpose (if any) of humanity.

Al-Rodhan's account of human nature and its motivations synthesises the findings of these four neurophilosophical questions. In his view, the central role that emotions play in moral judgments and cognition, the findings indicating that we do not have an innate morality, and the compelling case for our actions being ultimately motivated by our own 'perceived self-interest' together motivate an account of human nature that is fundamentally emotional, amoral, and egoistical. Al-Rodhan has theorised that we are motivated primarily by what he calls the NeuroP5: *power, profit, pleasure, pride, and permanence*. While this may sound pessimistic, Al-Rodhan's mission is ultimately founded on the hope that it is on the basis of such pragmatic and neuroscience-based self-understanding that we can have a fighting chance of making *collective* progress in peace, security, knowledge, and prosperity.

NTP has important implications for geopolitics.

The time has now come to push the neuro-techno-philosophical envelope further, as the very question of what it means to be human (or transhuman) is reshaped before our eyes. Given the meteoric advances in neuroscience and neurotechnology, anyone seeking to understand, predict, encourage, or prevent the impending disruptive technologies as well as societal implications that will emerge in their wake would do well to study and practice NTP. Indeed, Al-Rodhan maintains that humanity itself will need thinkers that are highly trained in NTP to better comprehend ourselves, the world, its frontier complex risks, and our place within it.

Human enhancement and transhumanism

Humans continuously adapt themselves according to their values and aims. While this was traditionally done through education and training, we can increasingly also transform ourselves through neuromodulation, defined by the *International Neuromodulation Society* as the targeted alteration of specific neuronal activities by means of drugs or technological interventions. This increasing ability to substantially manipulate human nature to the point of becoming transhuman and, conversely, machine nature to the point of their becoming transmachines, brings with it great opportunities but also huge risks and complicated ethical conundrums. Neuro-techno-philosophy will soon become essential if we are to responsibly navigate through all the intricacies that unprecedented progress brings. Neither neuroscience, technology, nor philosophy alone will be able to address them.

Most importantly, these impending transformations will leave both the subject matter and the theoriser completely changed from when the ancients first began to ponder the nature of the mind. Owing to this, the conclusions of previous philosophical theorising and scientific experimentation may cease to apply as they once did. Future generations may still stand on the shoulders of giants, but they will no longer have as much in common with them.

Personal response

How has the relationship between philosophy and (neuro)science evolved over time? And how do you see the interplay between the two fields developing in the pursuit of truth and meaning in the future?

Philosophy, the humanities, and science have always tried to make sense of human nature and the world we live in. Traditionally, they worked in isolation from one another, although, over the past century especially, we have seen how these disciplines can influence and learn from each other. For example, Marcel Proust revealed the fallibility of memory and showed that our sense of smell and taste are uniquely sentimental. Neuroscientists would later prove him right. In recent decades, new tools such as functional neuroimaging techniques as well as inter/intra-cellular recordings, have provided fresh insight into human cognition, emotionality, and morality. These elements of human behaviour form the core of many longstanding philosophical debates. The interplay between neuroscience and philosophy has helped improve our understanding of human nature. It has also enhanced insights into good governance paradigms and efficacious public policy. This is certain to have far-reaching implications for humanity at large.

What implications will transdisciplinary philosophy and, specifically, neuro-techno-philosophy have on establishing a better understanding of human nature and on the future of philosophy?

To navigate an uncertain future fueled by neuroscientific and technological advances, the world needs highly trained thinkers and philosophers who can connect the dots between various academic disciplines. Philosophers will need to engage in issues that lie on the cusp of (neuro)science, philosophy and disruptive technologies, such as AI, machine learning, generative AI, Artificial General Intelligence (AGI), and synthetic biology. The overlap between these disciplines is an area that I have called 'Neuro-Techno-Philosophy'. This novel type of inquiry describes the transdisciplinary endeavour of philosophers, (neuro) scientists and others, to anticipate the societal implications of the impending transformations of subjects and theorisers. Neuro-Techno-Philosophy will help us make sense of the world by informing how we view ourselves and the world, as well as our place within it. I am pleased that in philosophy today, there is an increased realisation of the critical value of transdisciplinary approaches to problem-solving and scholarly innovation, but we still have a way to go.

What impact are exponential advances in neurosciences, AI, machine learning, and synthetic biology having on human agency, dignity and civil liberties?

Rapid technological advances have rewired the relationship between philosophy and science. In the not-too-distant future, disruptive technologies could lead to the rise of artificial intelligence agents and human–machine hybrids that are similar to or even supersede traditional human intelligence. These technologies can be used for the benefit of humanity – or to its detriment. These developments are causing us to re-evaluate what it means to be human. And they are testing our ability to safeguard our nine fundamental human dignity needs: *reason, security, human rights, justice, accountability, transparency, opportunity, innovation, and inclusiveness*. At the moment, humanity is still playing catch-up. We need to get to grips with the ethical ramifications of these changes while we still can.

What role do you see transdisciplinary philosophy playing in governance, and sustainable global peace and security?

Transdisciplinary philosophy opens up new avenues in the philosophy of mind and human existence and furthers our understanding of what drives and motivates human behaviour. This is beneficial on a national, global, transcultural, and humanistic level. Take international relations, for example. By understanding the neurochemical and the collective neuropsychological foundations underpinning the behaviour of states, we are better placed to navigate the challenges posed by contemporary geopolitics and global security. Transdisciplinary endeavours such as Neuro-Techno-Philosophy teach us a lot about human frailty and malleability, both at the individual and group level. These insights are also critical for optimising governance paradigms so that they correspond directly to our non-reductionist understanding of our neurobiological and neurobehavioural needs, fears and predilections.

Details

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Bio

Professor Nayef Al-Rodhan, FRSA is a philosopher, neuroscientist, futurologist and geostrategist who has written 25 books and more than 300 articles. He was educated at the Mayo Clinic, Yale University, and Harvard University. Professor Al-Rodhan is an Honorary Fellow of St Antony's College, University of Oxford, UK and Head of the Geopolitics & Global Futures Program at the Geneva Centre for Security Policy, Switzerland. His research focuses on transdisciplinarity, neuro-techno-philosophy and the future of philosophy, with a particular emphasis on the interplay between philosophy, neuroscience, strategic culture, applied history, transcultural synergies, geopolitics, disruptive technologies, outer space, artificial intelligence, synthetic biology and international relations, and global security.

Further reading

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GCSP Geneva Centre for Security Policy