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. Transdisciplinarity, 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, it is only on the basis of pragmatic and neuroscience-based self-understanding that we can have a fighting chance of making collective progress in peace, security, knowledge, and prosperity.
neurophilosophy completely transformed the way we think about moral judgements, innate moral instincts, the pursuit of agony, 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 neurophilosophy completely transformed the way we think about moral judgements, innate moral instincts, the pursuit of agony, and the purpose (if any) of humanity. Therefore, the conclusions of previous philosophical theorems and scientific experimentation may cease to apply as they once did. Future generations may call to 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, neuro-techno-philosophy has shaped 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 neuroscience, philosophy and disruptive technologies, such as AI, machine learning, artificial intelligence, (AI), and synthetic biology. The overlap 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 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, trans-cultural, and humanitarian level. Transdisciplinary philosophy helps us to understand neuro-techno-philosophy as Neuro-Techno-Philosophy. We are better placed to navigate the challenges posed by contemporary geopolitics and global security. Transdisciplinary endeavours such as Neuro-Techno-Philosophy 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 the nature of democracy? Rapid technological advances have reshaped 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 surpass 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 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.

### Details

- **Author:** Nayef Al-Rodhan
- **Title:** 21st-Century Statecraft: reconciling power, justice and meta-geopolitical interests
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- **Year:** 2023
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- **Series:** International Relations, and Global Security.
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**Summary:** This book presents a comprehensive analysis of the interplay between philosophy, neuroscience, strategy, and global security. It argues for an approach that views the world as a complex system of interconnected parts, rather than as a collection of isolated events. The author emphasizes the importance of understanding the underlying dynamics of human behavior, and the role of technology in shaping these dynamics. This book is a must-read for anyone interested in the future of global politics and security.

**Further reading:**

**Biography:**

Professor Nayef Al-Rodhan, FRSA is a philosopher, neuroscientist, futurist and geopolitician who has written 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 transdisciplinary, neuro-techno-philosophy and the future of philosophy, with a particular emphasis on the interplay between philosophy, neurosciences, strategy, and global security. Transdisciplinary endeavours such as Neuro-Techno-Philosophy teach us a lot about human frailty and mortality, both at the individual and group level. These insights are also critical for optimizing governance paradigms as they correspond directly to our non-reductionist understanding of our neurobiological and neurobehavioural needs, fears and predilections.

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**Keywords:** transdisciplinary, neuro-techno-philosophy, future of philosophy, global security, philosophy and science, disruptive technologies, artificial intelligence.

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