

**CORTI VARELA, Justo; FARAH, Paolo Davide (Eds.). *Science, Technology, Policy and International Law*, (Edward Elgar Publishing, Cheltenham, 2024).**

In today's rapidly changing world, where technological and scientific advancements reshape the fabric of human society, the international law field must evolve to accommodate these shifts. Exploring the Intersection of Science, Technology, and Law, edited by Justo Corti Varela and Paolo Davide Farah, provides a comprehensive and intellectually rigorous exploration of this dynamic interplay. This book represents a significant contribution to interdisciplinary scholarship, offering insights into the ways law can adapt to, regulate, and influence scientific and technological progress. With contributions from leading experts across disciplines, the book succeeds in delivering a nuanced and sophisticated analysis of the key challenges and opportunities that lie at the nexus of these different but clearly intertwined fields. Notably, this volume compiles contributions from experts originally presented during workshops held under the auspices of the European Society of International Law (ESIL).

The volume is structured to provide a logical progression, moving from philosophical foundations, principles, and theoretical frameworks to specific case studies and practical applications. This clarity of organization enhances the reader's engagement and reinforces the editors' overarching thesis: that effective governance at the intersection of science, technology, and law requires a collaborative, multidisciplinary approach.

**Philosophical Foundations and Theoretical Frameworks:** The book begins with an incisive introduction by the editors, who set the stage by examining the broader implications of the relationship between science, technology, and international law. They argue that law serves as both a framework for and a product of societal evolution, inherently shaped by technological and scientific developments. This perspective underscores the importance of legal adaptability and innovation in addressing the challenges posed by the rapid pace of modern advancements. Kirk Junker's Chapter 2, titled "Facts Are the Moveable Furniture of the Legal Mind, Not Stones of Science", delves into the philosophical underpinnings of facts in legal reasoning. Junker challenges the traditional understanding of facts as static and objective, proposing instead that they are dynamic constructs shaped by the interpretative frameworks of legal systems. This chapter invites readers to critically reconsider the role of facts in the pursuit of justice and highlights the epistemological tensions between law and science.

**Regulatory Challenges in the Information Society:** The interplay between science, technology, and law becomes particularly evident in the context of the information society, as explored in Chapter 3 by Giovanni Bombelli and Paolo Davide Farah. This chapter examines the regulatory complexities of a knowledge-based economy, where technological innovation often outpaces the development of legal frameworks. Bombelli and Farah provide a detailed analysis of the challenges posed by the proliferation of digital technologies, emphasizing the need for adaptive legal mechanisms to address issues such as data privacy, intellectual property, and cybersecurity.

**Adapting Legal Systems to Scientific and Technological Advances:** Flexibility is a recurring theme throughout the volume, and Imad Antoine Ibrahim's Chapter 4 offers a compelling exploration of this concept. Ibrahim discusses the use of flexibility mechanisms in global regulatory frameworks to accommodate scientific and technological developments. By examining case studies from environmental and healthcare sectors, Ibrahim demonstrates how legal systems can remain relevant and effective in the face of rapid change. The precautionary principle, a cornerstone of contemporary International Environmental Law and regulatory practice, is the focus of Chapters 5 and 6. Alessandra Donati's chapter provides a critical analysis of the principle's role under EU law, emphasizing its importance in managing risks associated with emerging technologies. Donati frames the precautionary principle as a "post-modern" tool for addressing uncertainty in a "post-truth" era, offering a nuanced perspective on its application in policymaking. Building on this discussion, Justo Corti Varela's Chapter 6 examines the precautionary principle in international courts, with a particular focus on its implications for the burden of proof. Corti Varela's analysis is a valuable contribution to understanding the evidentiary challenges that arise when adjudicating disputes involving complex scientific and technological issues.

**Balancing Individual Freedoms and Public Interests:** The tension between individual rights and collective interests is a recurring theme in the anthology, exemplified by Antonio Quiros Fons's Chapter 7 on conscientious objection. This chapter explores the delicate balance between protecting individual freedoms and ensuring that scientific advancements are guided by sound ethical and legal principles. Quiros Fons provides a thought-provoking discussion of the role of law in mediating these competing interests, offering valuable insights for policymakers and legal practitioners.

**Technology and Democratic Processes:** The integration of technology into democratic governance is another critical area of inquiry addressed in the book. Mihail Stojanoski and Lilla Vukovich's Chapter 8 investigates the use of smartphone applications in democratic processes, analyzing their potential to enhance citizen participation and transparency. While the authors acknowledge the transformative potential of digital technologies, they also highlight the risks of exclusion, misinformation, and surveillance, emphasizing the need for robust legal and institutional safeguards.

**Regulating Emerging Medical Technologies:** The regulation of emerging medical technologies presents unique challenges under international law, as discussed in Gemma Hobcraft's Chapter 9. Using the Human Fertilisation and Embryology Authority and mitochondrial donation as case studies, Hobcraft examines the intersection of science and law in the context of cutting-edge medical innovations. Her analysis underscores the importance of balancing scientific progress with ethical considerations and societal values.

**Procedural and Substantive Approaches to Scientific Evidence:** Ciarán Burke and Alexandra Molitorisová's Chapter 10 offers a comprehensive examination of the procedural and substantive approaches to scientific evidence in legal decision-making. By comparing different jurisdictions and legal systems, the authors highlight the diverse ways in which scientific expertise is integrated into legal processes. This chapter provides valuable insights for improving the evidentiary standards and practices of courts and regulatory bodies.

**Climate Justice and Global Governance:** The ethical dimensions of climate justice are explored in Chapter 11 by Paolo Davide Farah and Alessio Lo Giudice. This chapter situates the concept of climate justice within the broader context of the Anthropocene, emphasizing the role of law in addressing the disproportionate impacts of climate change on vulnerable populations. The authors' analysis is both timely and poignant, offering a compelling vision for how legal systems can contribute to a more equitable and sustainable future.

**Global Climate Governance:** Anthi Koskina's Chapter 12 focuses on the science-based decision-making processes established under the Paris Agreement of 2015. Koskina provides a detailed analysis of the mechanisms through which scientific knowledge informs global climate governance, highlighting both the achievements and limitations of this approach. This chapter is particularly valuable for its practical insights into the implementation of international environmental agreements.

**Synthesis and Future Directions:** Finally, the analysis is brought together with a reflective chapter by the editors, who synthesize the insights and themes explored throughout the book. They emphasize the need for continued interdisciplinary collaboration and innovation in addressing the challenges posed by the intersection of science, technology, and law. The editors' concluding remarks provide a fitting end to a volume that is both intellectually rigorous and practically relevant.

**Conclusion:** *Science, Technology, Policy and International Law* is a landmark contribution to the field of legal studies, offering a rich and diverse array of perspectives on some of the most pressing issues of our time. Its interdisciplinary approach, coupled with its focus on real-world challenges and solutions, makes it an essential resource for scholars, policymakers, and practitioners.

The book succeeds in challenging preconceptions, encouraging critical thinking, and fostering a deeper understanding of the complex interplay between science, technology, and law. As technological advancements continue to reshape the legal landscape, this anthology will undoubtedly serve as a valuable reference for navigating the opportunities and risks that lie ahead.

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