pure legal battle in courts (which is nonetheless relevant to the judgment of the Supreme Court of Cassazione while the case is still pending), it is clear that in order to effectively tackle the complexity of disaster risks, stronger cooperation in the domains of science, law and communication is needed.

The L'Aquila case indirectly highlights the uneasy relationship between the Major Risk Commission and the Department of Civil Protection. Since the Major Risk Commission is an administrative body composed of scientists who are at the service of the Department of Civil Protection, fundamental questions arise about its responsibilities and tasks. In fact, one could provocatively ask what the infamous meeting at issue was for. As both the judges and scientists argue, clearly the scientists could not predict the earthquake and certainly the only effective way to protect against earthquakes is safe construction and safety culture. According to the judge in the case of first instance, the meeting should have assessed the risk at stake and it did not so properly. According to the scientists and the Court of Appeal, their statements during and after the meeting were scientifically founded and not reassuring. However, the Department of Civil Protection realised a communication press holding that no shocks were expected in L'Aquila. As the editors recognise as well, this press communication was flawed for both its unconditional character and its (non-scientific) content (p. 23).

If this was the situation, how can these mismanagement problems be fixed? And more specifically, how should the relation between the scientists of the Major Risk Commission and the Civil Protection service be structured? What should be the organisational, ethical and functional arrangements that can relieve scientists giving pure scientific advice from the responsibilities linked to administrative mismanagement? Also, the involvement of scientists in risk communication is more problematic if they act as regulatory scientists rather than as single individuals and as academics discussing findings and being reviewed by their peers. These questions are pertinent also in light of the appeal judgment that overturned the first instance verdict on the formal grounds of the qualification of the meeting. Since it was not an official meeting of the Major Risk Commission, there was not a duty of care related to the membership of this administrative body and each scientist was therefore individually responsible for his statements (L'Aquila Court of Appeal, 3317/2014, p. 169). Indirectly, this confirms the existence of a substantively higher duty of care when scientists act in their capacity of members of the Major Risk Commission.

Unfortunately, the book does not specifically address these complementary aspects of administrative decision-making in the Major Risk Commission. This is clearly due to the fact that the book discusses the criminal case by focusing on the substantive content of the scientists' statements in both the risk assessment and risk communication phases. Therefore, it focuses on the conduct of individual scientists rather than the institutional framework in which they are required to act. However, some chapters touch upon the problem when reporting elements of the context that show the complex interaction which occurred between the scientists of the Major Risk Commission and the Civil Protection Department during the infamous meeting. It would be useful if scientists could contribute to defining the statute of regulatory science, so that the depicted existing incommunicability could start to be functionally shortened.

The book attains a passionate critic of the L'Aquila case that is welcomed as a first attempt to discuss the role of science in disaster prevention. It would be extremely beneficial if further structured discussion about the uneasy interactions and the margins of mutual understanding within and across these relevant communities would follow. Science, law, and media should be engaged in a deeper interdisciplinary debate on regulatory science, standards of judicial review and risk communication. Clearly, such discussion would be difficult, but it would be the most fruitful to prevent the unwanted collision of disciplines.

## *The Global Politics of Science & Technology – Volumes 1 & 2*

by Maximilian Mayer, Mariana Carpes, Ruth Knoblich (eds)
Heidelberg: Springer, 584 pp.,
Two volume set, 199.99 €; Hard-cover

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Science and Technology has attracted considerable attention within International Relations (IR)

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studies, but to some extent, this appears to have been largely within the context of 'strategic tool use' by the different actors in the global economy. The problem, as it is framed within this book, is that for many authors, Science and Technology, and the global dimensions thereof, remains a secondary consideration to IR scholarship, rather than what seems to be an important (albeit emerging) driver of the global political system. Contrary to the expectations of post-World War II IR scholars, Science and Technology research has not developed into a specialised subfield within IR, as it has in other disciplines. This lack of research interest, apparent from the contribution IR makes to the published literature on the topic, has led the editors of this book (Mayer, Carpes & Knoblich) to advocate that IR scholars need to engage more systematically with the topic as a matter of urgency. They identify a critical research need that IR address its 'internal logics, so that it is better equipped to genuinely theorise and conceptualise the variety of meanings, the forms of power, and political ramifications of current science and technological innovations'.

This book is a comprehensive and extensive attempt to capture and explore the politics of Science and Technology ('*techno-politics*'), from multiple perspectives that traverse classical themes in IR (i.e. nuclear threats & global controls, the role of scientific epistemic communities in shaping global practice) to more recent debates (i.e. nanotechnology & apportioning international market shares, state territoriality & governance of virtual borders in cyperspace). It is a two volume book, with each volume able to be acquired individually, as well as a single unit.

The first volume (*Volume 1: Concepts from International Relations and Other Disciplines*) presents the status quo of existing IR research on the global politics of science and technology. The authors critically discuss and deconstruct the impact of scientific innovation and technological development on the international political economy, using largely theoretical argument. Using specific examples that include *inter alia*, weapon systems, innovation projects and biotechnology, intellectual property rights and Westphalian sovereignty, the authors (in different contexts and to differing degrees) demonstrate that scientific advances, and the associated technological progress, is a deeply political phenomenon; one that is 'interwoven in the fabric of power' and instrumental in driving transformations of the global system and shaping the relationships between political actors. The second volume (*Volume 2: Perspectives, Cases and Methods*) details specific case-studies and provides comparative analysis from most continents. Herein, these authors document the extent to which different technologies and scientific practices have shaped local conditions, and how this in turn, affects their relative contributions to global collaborations and the co-production of knowledge.

Given the recognition that this type of research is intrinsically multidisciplinary in nature, this book, through its diverse authorship and the essay topics covered in both volumes, explicitly reinforces an interdisciplinary commitment to exploring the topic from different theoretical and disciplinary viewpoints. Together, both volumes attempt to clarify and rearticulate the theoretical framework that IR scholars use to conceptualise and engage with Science and Technology, i.e. as an appropriate lens to interpret value judgements and political motivations, and in so doing, elaborate on its (under-researched) potential as a primary research field within IR studies.

The introductory chapter of Volume 1 (written by the editors) provides significant scene-setting for the rest of the book. I felt it was less an introductory framing of the problem overall, and more a considered research contribution in itself. It does however narrate IR theorising on Science and Technology through time, the current knowledge gaps and historical justification of why such gaps may prevail. It provides reasonable argument to why IR needs to make more meaningful contributions to the global discussion on this topic and provides strong motivation for interdisciplinarity. Similarly, the introductory chapter of Volume 2 is also impressive. It develops upon the notion of 'techno-politics' through the two distinct perspectives of *interaction* between- and *co-production*-of international politics and technology/science; perspectives the authors put forward as an alternative theoretical understanding for research in this field.

Each subsequent chapter in both volumes is presented as a stand-alone paper. I found each paper interesting individually, and as a collective, feel that they will constitute the seminal body of literature in this field going forward. However, I felt there would have been considerable value for the book as a whole, were the editors to provide, more formally, a 'golden thread' to better link the chapters, and the sections, together in each volume. Without this, some of the message of each volume is lost. In Volume 1 particu-

larly, I found the divisions of the sections somewhat arbitrary and confusing, overlapping in content (e.g. Parts 2 & 3: '*Interventions from STS, History, Innovation Studies & Geography'* versus '*Exploring a Multi-Disciplinary Field'),* and the chapter placement, accidental. It is likely this would have been rectified with section introductions/overviews from of the editors before the papers were presented. Given the range of topics addressed throughout the book, and the diversity of ideas that the reader must engage with, it would have been appropriate to have concluding remarks that synthesised the themes in each section. Similarly, it was disappointing that there was no single overarching conclusion synthesising the contributions of both volumes.

One of this book's great strengths however, is the detail to which the authors of each paper grapple with Science and Technology as a research priority within existing IR frameworks, while also, where appropriate, proposing new constructs to guide further study. The detail in the case studies of Volume 2 is particularly satisfying, and goes a long way to providing a 'global toolbox of methodological evidence', one that links empirical evidence from local studies to the global IR scholarship. As whole, the papers in both volumes provide a diversity of perspectives and share the considerable experience of the authors, presented as a single, accessible and easily-referenced compendium; one that the editors argue is the first of its kind on this topic.

For me this was not a book to engage with casually; it required consistently careful reading, away from distraction, preferably with an internet connection close by (or notepad, depending on your generational preference), so as to further clarify some of the points raised by individual authors. The tone of the material is clearly aimed at the IR research community, regardless of the book's interdisciplinary authorship. I would argue further, that the authors specifically target senior post-graduates and established academics; those already with considerable experience in advanced IR theory. However, this is not to say that the book's content is beyond the less experienced researcher, as it certainly provides good reference material for further studies around this topic, presents research that is at the cutting-edge of IR scholarship, and is sufficiently broad to interest researchers from overlapping fields.