The British Journal for the History of Science (2025), 1–2
doi:10.1017/S0007087425101350

BOOK REVIEW

Roberto Lalli and Jaume Navarro (eds.), *Globalizing Physics: One Hundred Years of the International Union of Pure and Applied Physics*

Oxford: Oxford University Press, 2024. Pp. 336. ISBN 978-0-19-887868-1. £45.00 (hardback).

Kapil Patil

Shiv Nadar University

Modern science historiography has recently developed an exciting scholarly focus on how international relations influence scientific knowledge production and dissemination. This scholarly strand, referred to as science diplomacy history or historical science diplomacy, sheds new light on the encounters between modern science and interwar and Cold War global politics, and reveals how they influenced and shaped each other. At the turn of the twentieth century, the secretary of the Royal Society, Arthur Schuster, famously held that 'it may yet come to pass that when diplomacy fails – and it often comes perilously near failure – it will fall to the men of science to preserve world peace'. Schuster's pronouncement about scientific actors preserving international peace and stability stemmed from his belief in the principle of 'scientific internationalism', which he believed enabled scientific communities to resolve academic and provincial disputes, forge common standards of inquiry and help promote global peace and stability.

The self-representational value of scientific internationalism, as Geert Somsen noted, has been immensely attractive to policymakers (Somsen 2008). Despite the destructive role of science in the two major wars of the twentieth century, Western policymakers were not dissuaded from invoking the virtue of scientific internationalism to forge a post-war international order. The principle of scientific internationalism, which requires scientific actors to navigate political divides, renders scientific agreements as inherently diplomatic endeavours, making science diplomacy a subject of profound academic interest. Scores of historical case studies on international scientific congresses, associations and experts in the twentieth century epitomize the diplomatic turn now under way in the historiography of science. The volume under review is an essential addition to this body of scholarship.

Known worldwide as the standardizer of symbols, units and nomenclature and the promoter of scientific research and education, IUPAP's institutional trajectory resoundingly validates Schuster's prophecy. The role of the International Research Council (IRC) and its allied unions in navigating the Cold War conflict had remained unexamined in the literature. Aside from the saga of multiple boycotts and counterboycotts made by national committees in the IRC during the world wars, few consequential writings exist on the IRC. This comprehensive and meticulously researched volume successfully fills the historiographical void, showing how IUPAP carved a unique place within the twentieth-century international scientific milieu through practising science diplomacy towards upholding internationalism in science.

Robert Lalli's characterization of IUPAP as a 'hybrid science diplomacy agent' is rather apt, since it impacted both epistemic and interstate relations during the Cold War. Published on the heels of IUPAP's centenary celebrations, the volume offers a detailed account of how the union shaped the international landscape of physics over the century. The three broad sections of the volume map the IUPAP's journey through its origins after the Second World War, its struggles during the Cold War, and its promotion of global scientific collaboration. As the editors emphasize in their introduction, *Globalising Physics* offers a compelling account of the dynamic relation between science and international politics through its historical unfolding and global repercussions.

Science diplomacy is a binding theme, enabling individual authors to detail IUPAP's navigation of political tensions and its orchestration of the international scientific order. For instance, chapters by Doubravka Olšáková and by Danian Hu, Jinyan Liu and Xiaodong Yin draw attention to contentious membership debates in which the Union's non-discriminatory approach enabled national committees of the German Democratic Republic (GDR), Taiwan and mainland China to join the union. IUPAP's professed neutrality was a crucial science diplomacy act in resolving contentious nationality issues and providing membership to aspiring national groups, thus balancing scientific universalism with political realities.

Simone Turchetti's chapter documents the IUPAP interventions to protect scientists' mobility and address travel restrictions for researchers during the Cold War. It discusses how IUPAP resisted pressures to exclude scientists from adversarial nations while positioning itself as a guardian of scientific universality. The other notable theme is the deconstruction of categories like 'pure' and 'applied' in IUPAP's nomenclature. Joseph Martin's essay contends that the separation between pure and applied physics emerged within individual national contexts through their distinctive historical and institutional settings. Another notable theme is IUPAP's move to globalize physics teaching through signature pedagogies delineated in Josep Simon's chapter.

Lastly, the chapters detailing the role of various individuals throughout IUPAP's journey make for an excellent read. From Kenji Ito's chapter documenting the work of the invisible physicist in repairing post-war scientific ties, through the organization of an international conference, to Danielle Fauque and Brigitte van Tiggelen's reflection on the steadfastness of Pierre and Joliot Curie about the ownership of radium standards, and Luciana Vieira Souza da Silva shedding light on Gleb Wataghin's experiences with IUPAP, the volume details the way various individuals shaped IUPAP and in turn were shaped by it.

While claiming to make physics global, the volume's account of African, Asian and Latin American physicists within IUPAP–ICSU networks leaves much to be desired. Having its overall focus on Euro-American leadership, with the notable exception of Homi J. Bhabha from India, the volume presents limited discussion of how physicists from the Southern world engaged with IUPAP's efforts.

As international science faces renewed fractures, neutral platforms like IUPAP remain essential to sustain political dialogue. The deepening tech war and the political pressures on universalism will likely render it more fragile, raising fears of its complete breakdown in the years to come.

Globalising Physics is a vital resource for scholars of science diplomacy, as it details how a scientific union became an unexpected force for internationalism during the Cold War. It is a must-read for historians and practitioners of science and diplomacy.

https://doi.org/10.1017/S0007087425101350 Published online by Cambridge University Press