

Enlightening the dark zone

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SUMMARY

Enlightening the Dark Zone examines the ideas, achievements and failures of scientists to turn science into a powerful engine of peace and modernity in the middle of the twentieth century. It scrutinizes an ambitious plan by the United Nations Educational, Scientific and Cultural Organization (UNESCO) to create an International Institute for the Hylean Amazon (IIHA) in the heart of the Amazon forest in 1946. Scientists from North America, Latin America and Europe partook in creating a world-leading laboratory for tropical research through which they aspired no less than building world peace and modernizing the underdeveloped tropical confines of the globe. Despite its laudable intentions and an initial enthusiastic welcoming from local scientists, the IIHA was quickly resisted, remodeled and eventually undone in 1952 by the interventions of Latin American actors and events. In 1947, the Latin American scientists involved with the making of the IIHA coalesced to redefine the proposed institute from a global to a regional institute. They feared that UNESCO's proposal would not help emancipate the Amazon but rather re-instate old colonial patterns that would renew the subjection of the Amazon to the benefit of the North. The remodeling of the IIHA was however abruptly terminated when the Brazilian parliament, backed by Brazil's technocratic elite, rejected UNESCO's project in 1952 and create in its place the National Institute for Amazonian Research (INPA) and the Superintendence for the Planning of the Economic Valorization of the Amazon (SPVEA) in 1954. By reconstructing the ideological origins of the projected laboratory and the tumultuous disputes that sparked its tragic termination six years later, this monograph draws up a bigger picture on how scientists mobilized science as a political instrument and ideology to shape national and global modes of governance between 1937 to 1959.

The aims of this study are threefold. First, it looks at the political activism of scientists from North and South and seeks to understand how they succeeded in taking up an increasingly visible role in the international political arena in the 1930s and 1940s. Second, it emphasizes the worldviews of these scientists and unravels what exact political functions they assigned to science and how their different conceptualizations of technocratic rule competed in the reordering of post-war society. Lastly, it zooms in on the effects of these scientific worldviews on the post-war reconstruction process. Focusing on the IIHA, this monograph examines how the scientific reordering of the post-war world proposed by scientists produced new conceptions of post-war modernity as well as alternative forms of world order.

This study answers these questions by following the conflicts and controversies that punctuated the making of the IIHA. Stretching over the period 1937-1959, this journey takes us from China, where the British biochemist Joseph Needham challenged the existing international organization of science and successfully conducted a worldwide campaign in favor of science at UNESCO, to London and Paris, where he and Northern

and Southern scientists quarreled about the nature and purpose of the scientific program of UNESCO. From Paris, where UNESCO scientists devised a plan to create the IIHA, we travel to the heart of the Amazon to reconstruct the disputed making of the project, witness its demise, and trace its reinvention into the National Institute for Amazonian Research (INPA) in Brazil. Focusing on local voices, this query into the unsuccessful establishment of the IIHA does not just show different models of what the IIHA was to be but sheds light on competing visions of world order, science and modernity in the tropics.

The making of the IIHA, as it moves back and forth across the North-South divide, also offers an opportunity to show how technocracy as a political ideology flourished across the globe and, in turn, to decenter the recent narratives on post-war international and reconstruction history. The tumultuous history of the IIHA reveals how much the advent of post-war technocracy in the 1940s and 1950s was construed beyond the nation state, across the globe and through the political engagement of scientists from North and South. Technocracy was not a mere western invention and this book demonstrates how it also arose from often overlooked places standing outside the Western world that Needham named the *Dark Zone*. These places such as British colonial Africa, war-torn China and the vast forests of Amazonia were not mere canvas for western-inspired technocratic change but a prolific source of alternate visions of science and society. Looking at the global and transnational geography of reconstruction and more specifically at its peripheral ends like Amazonia shows the building of post-war technocracy as a polyphonic, dialogical and disputed process involving Western and Southern scientists alike.

This monograph is divided into two parts, which follow chronologically the making and unmaking of the IIHA across its entire lifespan and highlight thematically the rise of post-war technocracy and its competing shapes. The first part traces the ideological origins of the IIHA into the politicized fringes of science in the 1930s and reconstructs the various ideals of technocracy that arose before and during WWII. The second part of the book looks at the actual implementation of the IIHA and its reinvention as the INPA between 1946 and 1959. In doing so, it emphasizes the ways by which post-war technocracy was endorsed and disputed as well as what these competing visions of technocracy entailed regarding the shape of the post-war political and international order.

Part 1 '*Scientific Ideals of World Order: Scientific Internationalism and Technocratic Rule for Peace*' digs into the intellectual and ideological origins of the IIHA project. Chapter 2 examines the international campaign that Needham orchestrated from China during WWII to obtain the creation of a scientific mandate for UNESCO. Chapter 3 turns to the scientific and political trajectory of the leading architects of the IIHA, Needham and the Brazilian chemist Paulo Carneiro. Along the way, the first part of this book revisits the interwar period as the background to understand how scientists formulated, advocated and

succeeded in transforming science and the question of its development into a politically significant matter for the reordering of the post-WWII world. Focusing on the creation of UNESCO, chapter 2 retraces how scientists campaigned for the inclusion of science in the new UN agency and shows how such scientific mandate transformed the terms of cultural diplomacy as previously defined by UNESCO's ancestor the International Institute for Intellectual Cooperation (IIIC). By unraveling the wartime discussions on the role of science in the post-war era and recollecting the political, international and social functions that leftist scientists, imperial experts and Brazilian positivists granted to science in the 1930s, chapter 2 and 3 explore how scientists conceived science as the engine of modernity and framed themselves as carriers of progress. The politicization of science, however, was neither a monolithic nor an undisputed process as several imaginaries of a scientific world order competed. These competing imaginaries and the tensions they sparked infused the post-war reconstruction process, the creation of new technocratic institutions and the attempts of scientists to create conditions of peace and progress via science in particular.

Part 2 '*Scientific Worldmaking in the Jungle*' closely investigates the implementation of the IIHA in the heart of the Amazon basin and reconstructs the controversies that led to its demise and replacement by the INPA in Brazil. To this end, three distinct groups of scientists, which competed in the making of the IIHA, were singled out, each of which advanced a different conception of the institute. Part 2 mobilizes the notion of "worldmaking" to underscore how these three groups of scientists intended to remake the world based on competing scientific conceptions of the social and the natural world. Each chapter is dedicated to one controversial sequence of the making and unmaking of the IIHA and successively looks at the worldmaking visions each group sought the IIHA to embody. In chapter 4, Needham and the Natural Science division of UNESCO looked at the technocratic reforms of the British Empire to design the IIHA as the platform from which scientists could lay down the foundations of a new pan-tropical society in the heart of the Amazon. Chapter 5 focuses on a group of Latin American positivists who contested UNESCO's plan and re-modelled the IIHA as an instrument of regional integration. Based on local positivist imaginaries and practices of science, they aimed to build a positivist social utopia where continental modernity and unity could be attained through the scientific action of the IIHA. Chapter 6 re-visits the tragic end of the IIHA that followed Brazil's decision to terminate the laboratory project of UNESCO. The Brazilian technocrats built upon the IIHA proposals to launch a vast process of national modernization. They placed the co-advancement of national science and the development of Amazonia at the center of Brazil's national project. They mobilized modern science to respond to a variety of local socio-economic imperatives as well as broader political needs to invent a distinct, non-European identity for Brazil and break the country's cycle of

dependency with the West. Via a set of technocratic institutions, including the INPA and the SPVEA, they institutionalized and mobilized scientific research to strip the Brazilian Amazon from its sluggish primitivism, assert its Brazilianity and construct the Brazil of the future in its midst.

Taken together, this monograph highlights the significant role scientists performed in producing scientific and technocratic cultures that established science as the engine of post-war modernity. It dissects the ways in which these new technocratic imaginaries challenged the existing, cultural, political and international order. These insights suggest three historiographical revisions. First, tracing the IIHA shows that the politicization of science and the scientization of politics was not a Western invention but a disputed process that took place in both hemispheres. Second, the rise of post-war technocracy calls for a revision of our perception of the mid-twentieth century. The 1940s were less a moment of abrupt rupture with the interwar period than the outcome of a gradual process of adaptation. Focusing on the period 1937-1959 to appreciate the political and international changes of the mid-twentieth century, contributes to underscore important and otherwise invisible shifts such as the rise of technocracy. Finally, this study urges to consider the UN seriously. By showing the substantial part played by UNESCO in the political, scientific and international shifts that unfolded in the period 1937-1959, this monograph underscores the historical role of UN agencies like UNESCO. In so doing, it also strengthens the historiographical value of international organisations as terrain and agent of historical change. By investigating UNESCO's early years, it contests the teleological narratives associated to the birth of the UN, displays post-war technocracy as a central political and international feature of mid-twentieth century history and highlights the role of Global South actors, ideas and terrains in modelling the post-war order.

