

**Eden Medina, Ivan da Costa Marques, and Christina Holmes, eds., *Beyond Imported Magic: Essays on Science, Technology, and Society in Latin America***

**Cambridge, MA: MIT Press, 2014. 396 pp.**

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Latin American and East Asian societies have experienced somewhat similar social, cultural, and political complexities associated with “imported” science, technology, and medicine. In this regard, *Beyond Imported Magic*, edited by Eden Medina, Ivan da Costa Marques, and Christina Holmes, offers a rich source of ideas for East Asian readers. *Beyond Imported Magic* is a compilation of seventeen essays by a diverse group of researchers: fifteen based in Latin America, nine from the United States, and four from Europe, comprising eight historians, seven anthropologists, six sociologists, and seven STS researchers. The editors grouped the contributions into three main sections in the book.

The first section, titled “Latin American Perspectives on Science, Technology, and Society,” opens with Henrique Cukierman’s “Who Invented Brazil?,” which studies the mutual influences between scientific expeditions to northern tropical Brazil and the people living in that inland region between 1911 and 1913. He discusses the scientists’ awareness of “the poverty—the misfortune of our abandoned backland inhabitants” and presents the social challenges that these realities posed to the scientific explorers. Mariano Fressoli, Rafael Dias, and Hernán Thomas study the tensions between global markets and local developments in the field of innovation. In “Innovation and Inclusive Development in the South: A Critical Perspective,” they show how grassroots and bottom-of-pyramid movements offer insights and lessons on how to create innovation networks, by analyzing the contemporary Latin American experience and Indian cases since the beginning of the twenty-first century. “Working with Care: Narratives of Invisible Women Scientists Practicing Forensic Genetics in Colombia,” by Tania Pérez-Bustos, María Fernanda Olarte Sierra, and Adriana Díaz del Castillo H., discusses gender issues encountered by women forensic scientists. The chapter focuses on these invisible women scientists’ contributions to science by showing that care is crucial to the doings of science, particularly in contexts of social conflict. These

authors conclude that “care can be understood as a way of reimagining scientific practice in Latin America” (80). In “Ontological Politics and Latin American Local Knowledges,” Ivan da Costa Marques analyzes the notion of *multimistura*, a Brazilian nutritional innovation, by presenting three stories that articulate what he calls “techniques and truths.” This notion allows him to discuss ontological politics, in particular how “Western realities become ‘the reality’ and other people’s realities are considered merely different interpretations of reality” (85). In the final contribution to this section, Michael Lemon and Eden Medina present a study of Latin American history of technology in “Technology in an Expanded Field: A Review of History of Technology Scholarship on Latin America in Selected English-Language Journals.” By analyzing two communities, Latin American studies and history of technology scholars, they observe that there is ample space for cross-fertilization between them. They conclude that, due to its particularities, Latin America is “an essential place” for gaining new insights into the history of technology.

The second section, “Local and Global Networks on Innovation,” studies “flows of technology and scientific knowledge across communities, regions, institutions and nations” (13). The section begins with “South Atlantic Crossings: Fingerprints, Science, and the State in Turn-of-the-Twentieth-Century Argentina,” by Julia Rodríguez, who presents the social environment and international exchanges that led to a relevant scientific discovery in forensics made in Argentina and then spread to other parts of the world. In “Tropical Assemblage: The Soviet Large Panel in Cuba,” Hugo Palmarola and Pedro Ignacio Alonso study the deployment and development of a large industrial housing project, brought from the Soviet Union and adapted through local innovation to the realities of Cuban social settings and physical environment. Two essays in this section use anthropological methodologies to study the experiences of the One Laptop per Child project in Latin America. Anita Say Chan, in “Balancing Design: OLPC Engineers and ICT Translations at the Periphery,” deals with the deployment of this project in Puno, Peru, while Morgan G. Ames in “Translating Magic: The Charisma of One Laptop per Child’s XO Laptop in Paraguay” studies the process of implementing the idea in Paraguay’s schools. Noela Invernizzi, Matthieu Hubert, and Dominique Vinck study the influences of foreign countries in the development of nanoscience policy in Brazil, Mexico, and Argentina in “Nanoscience and Nanotechnology: How an Emerging Area on the Scientific Agenda of the Core Countries Has Been Adopted and Transformed in Latin America.” This section closes with “Latin America as Laboratory: The Camera and the Yale Peruvian Expeditions,” in which Amy Cox Hall contributes to unveiling the role of and practices concerning the camera as technological object in the expeditions. She argues that this equipment was central in forming the evidence and imaginary brought back by scientists from their expeditions.

The third section, “Science, Technology, and Latin American Politics,” begins with three essays devoted to the development of atomic energy on the continent. Jonathan Hagood, in “Bottling Atomic Energy: Technology, Politics, and the State in Peronist Argentina,” studies the complex and still-debated controversy around the early attempt to develop nuclear power in Argentina in the 1950s. Gisela Mateos and Edna Suárez-Díaz, in “Peaceful Atoms in Mexico,” study the network around the development of the Mexican project for peaceful uses of atomic energy between 1945 and 1970. Manuel Tironi and Javiera Barandiarán, in “Neoliberalism as Political Technology: Expertise, Energy, and Democracy in Chile,” study two cases of energy

policy under the neoliberal regime in Chile: the change in nuclear policy developed under the Chilean dictatorship in the 1980s, and the hydropower generation policy of recent democratic governments. Ana Delgado and Israel Rodríguez-Giralt in “Creole Interferences: A Conflict over Biodiversity and Ownership in the South of Brazil” present the controversy over creole seeds and ownership and the “interference” of creole seeds with existing forms of order. The final essay in this section is “The Juridical Hospital: Patient-Citizen-Consumers Claiming the Right to Health in Brazilian Courts,” in which João Biehl studies the changes that the notion of “right-to-health,” introduced by the 1988 Constitution, has brought to Brazilian legislation in the last decade.

The case studies selected by the editors are compelling, and the arguments provided by the authors are without doubt persuasive. The book’s title presents the thesis that sets its goal and permeates all the essays—the authors and editors would like to move beyond the widespread idea that science and technology in Latin America is a magic black box coming from the north. The task is not simple, as there are no adequate analytical frameworks to organize reflection on the phenomena (Fajnzylber 1988). In this regard, edited volumes can be instrumental in discussing and challenging this pervasive and long-standing thesis of black-boxed technology. Thus, *Beyond Imported Magic* emerges as a solid and inspiring contribution in this direction (for a similar effort, in Spanish, see Salvatore 2007). When discussing and researching STS in Latin America, one inevitably arrives at the topic of the “asymmetry” or the “unidirectional path” of science and technology, a topic that, to no surprise, permeates all the essays in this book. As Mateos and Suárez-Díaz write in their contribution, scholars of STS in the region need to challenge the thesis that “knowledge (science and technology) is imported from big centers of production and passively consumed at the periphery” (288). They argue that local contexts are equally influential in creating reality. There have been theoretical frameworks in this direction. One of the best known and most successful is dependence theory, which has been relevant in unveiling this asymmetry. However, by highlighting the role of developed nations in the creation of this asymmetry, it has undervalued the contribution of dependent countries to the empowerment of developed nations. The goal of most of the chapters is to highlight the local contributions and creations and to grant them a (usually neglected) value—this is highly positive. But one has to be cautious, as the process is profoundly subtle (Carmagnani 2011). A naive perspective stating that local contributions to science and technology are as valuable as the ones developed in the center could result in a misunderstanding of the foundations of current central powers. Future scholars should aim at addressing the most important problem of science and technology in Latin America, namely, its dual goals: demonstrating universality by being aligned with Europe and the United States, and exploring locality by being engaged with its local society. As the history of science and technology in Latin America teaches, there is no silver bullet.

All in all, this inspiring book is to be warmly welcomed. Its stimulating title is a wake-up call to reevaluate widespread concepts and ideas on the development of science and technology in Latin America. The case studies invite readers to engage in a transversal reflection on the experiences, problems, and challenges surrounding technological development faced by our societies. This book will engage East Asianists by delineating many of the deep concerns in technological developments shared by East Asian and Latin American countries.

## References

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