Science and American Foreign Relations since World War II

The sciences played a critical role in American foreign policy after World War II. From atomic energy and satellites to the Green Revolution, scientific advances were central to American diplomacy in the early Cold War, as the United States leveraged its scientific and technical preeminence to secure alliances and markets. The growth of applied research in the 1970s, exemplified by the biotech industry, led the United States to promote global intellectual property rights. Priorities shifted with the collapse of the Soviet Union, as attention turned to information technology and environmental sciences. Today, international relations take place within a scientific and technical framework, whether in the headlines on global warming and the war on terror or in the fine print of intellectual property rights. *Science and American Foreign Relations since World War II* provides the historical background necessary to understand the contemporary geopolitics of science.

GREG WHITESIDES is Assistant Professor of History at the University of Colorado, Denver.

Cambridge Studies in US Foreign Relations

Edited by

Paul Thomas Chamberlin, Columbia University
Lien-Hang T. Nguyen, Columbia University

This series showcases cutting-edge scholarship in US foreign relations that employs dynamic new methodological approaches and archives from the colonial era to the present. The series will be guided by the ethos of transnationalism, focusing on the history of American foreign relations in a global context rather than privileging the US as the dominant actor on the world stage.

Also in the Series

Jasper M. Trautsch, *The Genesis of America: U.S. Foreign Policy and the Formation of National Identity, 1793–1815*
Hideaki Kami, *Diplomacy Meets Migration: US Relations with Cuba during the Cold War*
Shaul Mitelpunkt, *Israel in the American Mind: The Cultural Politics of US-Israeli Relations, 1958–1988*
Pierre Asselin, *Vietnam's American War: A History*
Elisabeth Leake, *The Defiant Border: The Afghan-Pakistan Borderlands in the Era of Decolonization, 1936–1965*
Tuong Vu, *Vietnam's Communist Revolution: The Power and Limits of Ideology*
Michael E. Neagle, *America's Forgotten Colony: Cuba's Isle of Pines*
Lloyd E. Ambrosius, *Woodrow Wilson and American Internationalism*
Geoffrey C. Stewart, *Vietnam's Lost Revolution: Ngô Đình Diệm's Failure to Build an Independent Nation, 1955–1963*
Renata Keller, *Mexico's Cold War: Cuba, the United States, and the Legacy of the Mexican Revolution*

Science and American Foreign Relations since World War II

GREG WHITESIDES
University of Colorado Denver

CAMBRIDGE
UNIVERSITY PRESS

CAMBRIDGE
UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre,
New Delhi – 110025, India

79 Anson Road, #06–04/06, Singapore 079906

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning, and research at the highest international levels of excellence.

www.cambridge.org
Information on this title: www.cambridge.org/9781108420440
DOI: 10.1017/9781108303965

First published 2019

Printed and bound in Great Britain by Clays Ltd, Elcograf S.p.A.

A catalogue record for this publication is available from the British Library.

Library of Congress Cataloging-in-Publication Data
NAMES: Whitesides, Greg, author.
TITLE: Science and American foreign relations since World War II / Greg Whitesides, University of Colorado, Denver.
DESCRIPTION: Cambridge, United Kingdom ; New York, NY : Cambridge University Press, 2019. | Series: Cambridge studies in US foreign relations | Includes bibliographical references and index.
IDENTIFIERS: LCCN 2018034473 | ISBN 9781108420440 (hardback : alk. paper) | ISBN 9781108409919 (paperback : alk. paper)
SUBJECTS: LCSH: Science and international relations–United States–History–20th century. | Science and international relations–United States–History–21st century. | United States–Foreign relations–1945-1989. | United States–Foreign relations–1989–
CLASSIFICATION: LCC JZ1254 .W45 2019 | DDC 327.73–DC23
LC record available at https://lccn.loc.gov/2018034473

ISBN 978-1-108-42044-0 Hardback

Dedicated to my family and Lee

Contents

Figures

Acknowledgments

I would like to thank Lionel M. Jensen, Lawrence Badash, and Fredrik Logevall for their inspiration and tutelage. Additionally, my editors at Cambridge University Press, especially Deborah Gershenowitz, Paul Thomas Chamberlin, and Natasha Whelan, deserve special thanks for their patient assistance in guiding this book to publication.

Abbreviations

AAAS	American Association for the Advancement of Science
ABCC	Atomic Bomb Casualty Commission
AEC	Atomic Energy Commission
AFP	Atoms for Peace (Chapter 2)
AFP	Alliance for Progress (Chapter 3)
ARPA	Advanced Research Projects Agency
ASTP	Apollo–Soyuz Test Project
BSF	Binational Science Foundation (the United States & Israel)
CAS	Chinese Academy of Sciences
CBD	Convention on Biological Diversity
CCF	Congress for Cultural Freedom
CERC	Clean Energy Research Center
CERN	*Conseil European pour la Recherche Nucléaire*
CFCs	Chlorofluorocarbons
COCOM	Coordinating Committee for Multilateral Export Controls
COMSAT	Communications Satellite Consortium
COPUOS	Committee on the Peaceful Uses of Outer Space
EPA	Environmental Protection Agency
ESA	European Space Agency
FAO	Food and Agriculture Organization
FAS	Federation of American Scientists
FDA	Food and Drug Administration
G7	Group of 7
G77	Group of 77
GAO	General Accounting Office
GARP	Global Atmospheric Research Program

GATT	General Agreement on Tariffs and Trade
GEF	Global Environment Facility
HGP	Human Genome Project
IAEA	International Atomic Energy Agency
IBP	International Biological Program
ICAO	International Civil Aviation Organization
ICGEB	International Center for Genetic Engineering and Biotechnology
ICSU	International Council of Scientific Unions
IGY	International Geophysical Year
IIAA	Institute for Inter-American Affairs
IICST	Iraqi International Center for Science and Technology
IIST	International Institute of Science and Technology
IPCC	Intergovernmental Panel on Climate Change
IRI	Industrial Research Institute
IRRI	International Rice Research Institute
ISS	International Space Station
ISTC	Institute for Scientific and Technical Cooperation (Chapter 4)
ISTC	International Science and Technology Center (Chapter 6)
ITER	International Thermonuclear Reactor
ITU	International Telecommunication Union
JECOR	Joint Economic Cooperation Office Riyadh
MAP	Mexican Agricultural Program
MEP	Malaria Eradication Program
NACA	National Advisory Committee for Aeronautics
NAS	National Academy of Sciences
NASA	National Aeronautics and Space Administration
NATO	North Atlantic Treaty Organization
NBS	National Bureau of Standards
NDRC	National Defense Research Committee
NGO	Non-Governmental Organization
NIH	National Institutes of Health
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NRC	National Research Council
NRDC	Natural Resources Defense Council
NSF	National Science Foundation
OES	Bureau of Oceans and International Environmental and Scientific Affairs
OMB	Office of Management and Budget

ONR	Office of Naval Research
OSRD	Office of Scientific Research and Development
OSTP	Office of Science and Technology Policy
PSAC	President's Science Advisory Committee
SITE	Satellite Instructional Television Experiment
SDI	Strategic Defense Initiative
TRIPS	Trade Related aspects of Intellectual Property rightS
TVA	Tennessee Valley Authority
TWAS	The World Academy of Sciences
UNAEC	United Nations Atomic Energy Committee
UNEP	United Nations Environmental Program
UNESCO	United Nations Educational Scientific and Cultural Organization
UNFCC	United Nations Framework on Climate Change
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USGS	United States Geological Survey
USPTO	United States Patent and Trade Office
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WMO	World Meteorological Organization
WTO	World Trade Organization