

## The Science of Bureaucracy

**Inside Technology Series**

Edited by Wiebe E. Bijker, W. Bernard Carlson, and Trevor Pinch

A list of the series appears at the back of the book.

# **The Science of Bureaucracy**

## **Risk Decision-Making and the US Environmental Protection Agency**

**David Demortain**

**The MIT Press  
Cambridge, Massachusetts  
London, England**

© 2019 Massachusetts Institute of Technology

No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from the publisher.

This work is subject to a Creative Commons CC-BY-NC-ND license. The open access edition of this book was made possible by generous funding from the MIT Libraries. Subject to such license, all rights are reserved.



This book was set in Stone Serif and Stone Sans by Westchester Publishing Services.

#### Library of Congress Cataloging-in-Publication Data

Names: Demortain, David, author.

Title: The science of bureaucracy : risk decision-making and the US Environmental Protection Agency / David Demortain.

Description: Cambridge, MA : The MIT Press, [2019] | Series: Inside technology series | Includes bibliographical references and index.

Identifiers: LCCN 2019010651 | ISBN 9780262537940 (pbk. : alk. paper)

Subjects: LCSH: United States. Environmental Protection Agency--Management--History. | Risk management--Government policy--United States--History. | Environmental policy--United States--Decision making. | Environmental policy--United States--History.

Classification: LCC TD171 .D46 2019 | DDC 363.700973--dc23

LC record available at <https://lcn.loc.gov/2019010651>

For Charline



## Contents

Acknowledgments	ix
Introduction	1
1 Risk Sciences: Expertise for Decision-Making and Dispute	31
2 The Invention of Quantitative Risk Assessment	51
3 Prioritizing Toxics: The Prehistory of Risk Management	79
4 Codifying the Risk Assessment–Risk Management Framework	105
5 Ruckelshaus and Risk: Representing the EPA	137
6 Risk Management: The EPA as a Decision-Making System	161
7 Designing a Science for Decisions	185
8 The Rise and Fall of Comparative Risk Assessment	211
9 Scientization and the Reform of the Risk Assessment– Risk Management Framework	231
10 Beyond the Risk Paradigm	273
Conclusion	305
Archival Sources and Documents	321
Acronyms	323
Notes	325
References	371
Index	421





This is a section of [doi:10.7551/mitpress/12248.001.0001](https://doi.org/10.7551/mitpress/12248.001.0001)

# **The Science of Bureaucracy**

## **Risk Decision-Making and the US Environmental Protection Agency**

**By: David Demortain**

### **Citation:**

*The Science of Bureaucracy: Risk Decision-Making and the US Environmental Protection Agency*

**By: David Demortain**

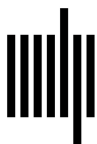
**DOI: 10.7551/mitpress/12248.001.0001**

**ISBN (electronic): 9780262356671**

**Publisher: The MIT Press**

**Published: 2020**

The open access edition of this book was made possible by generous funding and support from MIT Libraries



**The MIT Press**

© 2019 Massachusetts Institute of Technology

No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from the publisher.

This work is subject to a Creative Commons CC-BY-NC-ND license. The open access edition of this book was made possible by generous funding from the MIT Libraries. Subject to such license, all rights are reserved.



This book was set in Stone Serif and Stone Sans by Westchester Publishing Services.

#### Library of Congress Cataloging-in-Publication Data

Names: Demortain, David, author.

Title: The science of bureaucracy : risk decision-making and the US Environmental Protection Agency / David Demortain.

Description: Cambridge, MA : The MIT Press, [2019] | Series: Inside technology series | Includes bibliographical references and index.

Identifiers: LCCN 2019010651 | ISBN 9780262537940 (pbk. : alk. paper)

Subjects: LCSH: United States. Environmental Protection Agency--Management--History. | Risk management--Government policy--United States--History. | Environmental policy--United States--Decision making. | Environmental policy--United States--History.

Classification: LCC TD171 .D46 2019 | DDC 363.700973--dc23

LC record available at <https://lcn.loc.gov/2019010651>