#### THE CAMBRIDGE COMPANION TO THEATRE AND SCIENCE

Theatre has engaged with science since its beginnings in Ancient Greece. The intersection of the two disciplines has been the focus of increasing interest to scholars and students. *The Cambridge Companion to Theatre and Science* gives readers a sense of this dynamic field, using detailed analyses of plays and performances covering a wide range of areas including climate change and the environment, technology, animal studies, disease and contagion, mental health, and performance and cognition. Identifying historical tendencies that have dominated theatre's relationship with science, the volume traces many periods of theatre history across a wide geographical range. It follows a simple and clear structure of pairs and triads of chapters that cluster around a given theme so that readers get a clear sense of the current debates and perspectives.

KIRSTEN E. SHEPHERD-BARR is Professor of English and Theatre Studies at the University of Oxford. Her publications include *Science on Stage: From Doctor Faustus to Copenhagen* (2006), *Theatre and Evolution from Ibsen to Beckett* (2015), *Modern Drama: A Very Short Introduction* (2016), and *Twentieth-Century Approaches to Literature: Late Victorian into Modern* (2016), coedited with Laura Marcus and Michèle Mendelssohn and shortlisted for the Modernist Studies Association book prize.

## CAMBRIDGE COMPANIONS TO THEATRE AND PERFORMANCE

The Cambridge Companions to Theatre and Performance collection publishes specially-commissioned volumes of new essays designed for students at universities and drama schools, and their teachers. Each volume focuses on a key topic, practitioner or form and offers a balanced and wide-ranging overview of its subject. Content includes historical and political contexts, case studies, critical and theoretical approaches, afterlives and guidance on further reading.

#### Published and forthcoming titles

- The Cambridge Companion to Theatre and Science Edited by Kirsten E. Shepherd-Barr
- The Cambridge Companion to International Theatre Festivals Edited by Ric Knowles
- The Cambridge Companion to the Circus Edited by Jim Davis and Gillian Arrighi
- The Cambridge Companion to American Theatre since 1945 Edited by Julia Listengarten and Stephen Di Benedetto
- The Cambridge Companion to British Theatre since 1945 Edited by Jen Harvie and Dan Rebellato
- The Cambridge Companion to British Playwriting since 1945 Edited by Vicky Angelaki and Dan Rebellato
- The Cambridge Companion to British Theatre of the First World War *Edited by Helen E. M.* Brooks

#### Related Cambridge Companions

The Cambridge Companion to African American Theatre Edited by Harvey Young

- The Cambridge Companion to the Actress Edited by Maggie B. Gale and John Stokes
- The Cambridge Companion to British Theatre, 1730-1830 Edited by Jane Moody and Daniel O'Quinn
- The Cambridge Companion to English Melodrama Edited by Carolyn Williams
- The Cambridge Companion to English Restoration Theatre Edited by Deborah Payne Fisk
- The Cambridge Companion to Greek and Roman Theatre Edited by Marianne McDonald and Michael Walton
- The Cambridge Companion to Greek Comedy Edited by Martin Revermann
- The Cambridge Companion to Greek Tragedy Edited by P. E. Easterling
- The Cambridge Companion to Medieval English Theatre, second edition *Edited by Richard Beadle* and Alan J. Fletcher
- The Cambridge Companion to Performance Studies Edited by Tracy C. Davis
- The Cambridge Companion to Theatre History Edited by David Wiles and Christine Dymkowski
- The Cambridge Companion to Victorian and Edwardian Theatre Edited by Kerry Powell

# THE CAMBRIDGE COMPANION TO THEATRE AND SCIENCE

EDITED BY KIRSTEN E. SHEPHERD-BARR University of Oxford



CAMBRIDGE

Cambridge University Press 978-1-108-47652-2 — The Cambridge Companion to Theatre and Science Edited by Kirsten E. Shepherd-Barr Frontmatter <u>More Information</u>



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/9781108476522 DOI: 10.1017/9781108676533

© Cambridge University Press 2020

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2020

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

Library of Congress Cataloging-in-Publication Data NAMES: Shepherd-Barr, Kirsten, 1966– editor. TITLE: The Cambridge companion to theatre and science / edited by Kirsten E. Shepherd-Barr. DESCRIPTION: Cambridge ; New York, NY : Cambridge University Press, 2020. | Series: Cambridge companions to literature | Includes bibliographical references and index. IDENTIFIERS: LCCN 2020014101 (print) | LCCN 2020014102 (ebook) | ISBN 9781108476522 (hardback) | ISBN 9781108700986 (paperback) | ISBN 9781108676533 (epub) SUBJECTS: LCSH: Drama–History and criticism. | Science in literature. | Scientists in literature. | Theaters–Stage-setting and scenery. | Literature and science. CLASSIFICATION: LCC PN1650.S34 C36 2020 (print) | LCC PN1650.S34 (ebook) | DDC 808.2/936–dc23 LC record available at https://lccn.loc.gov/2020014101 LC ebook record available at https://lccn.loc.gov/2020014102

> ISBN 978-1-108-47652-2 Hardback ISBN 978-1-108-70098-6 Paperback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

## CONTENTS

	List of Illustrations	<i>page</i> vii
	List of Contributors	viii
	Acknowledgements	ix
	Introduction	1
	KIRSTEN E. SHEPHERD-BARR	
1	Objectivity and Observation	12
	DAN REBELLATO	
2	Staging Consciousness: Metaphor as Thought Experiment in	
	McBurney's Beware of Pity	26
	JANE R. GOODALL	
3	The Experimental/Experiential Stage: Extreme States of Being of and	
	Knowing in the Theatre	40
	CARINA BARTLEET	
4	A Cave, a Skull, and a Little Piece of Grit: Theatre in the Anthropocene	55
	CARL LAVERY	
5	The Play at the End of the World: Deke Weaver's Unreliable Bestiary	
	and the Theatre of Extinction	70
	UNA CHAUDHURI AND JOSHUA WILLIAMS	
6	Bodies of Knowledge: Theatre and Medical Science	85
	STANTON B. GARNER, JR.	
7	Pathogenic Performativity: Urban Contagion and Fascist Affect	101
	FINTAN WALSH	
		v

#### CONTENTS

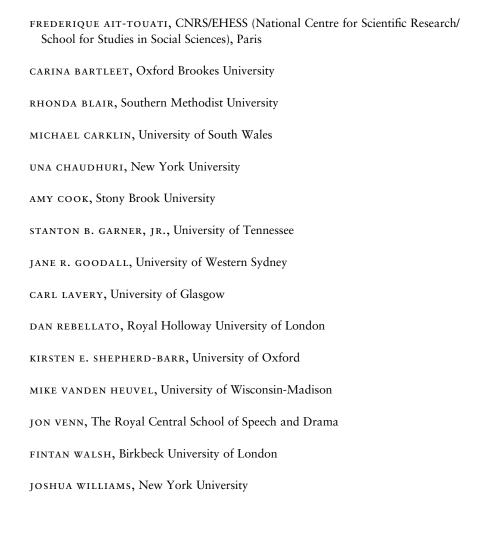
8	Theatres of Mental Health JON VENN	116
9	Devised Theatre and the Performance of Science MIKE VANDEN HEUVEL	131
10	Theatre and Science as Social Intervention MICHAEL CARKLIN	146
11	Acting and Science RHONDA BLAIR	162
12	Staging Cognition: How Performance Shows Us How We Think	176
13	Clouds and Meteors: Recreating Wonder on the Early Modern Stage FREDERIQUE AIT-TOUATI	188
14	'The Stage Hand's Lament': Scenography, Technology, and Off-Stage Labour KIRSTEN E. SHEPHERD-BARR	203
	Index	219

## ILLUSTRATIONS

5.1	From Deke Weaver, <i>The Unreliable Bestiary: Bear</i> (2016):	
	Ranger Joe with mask of polar bear expert	
	Malcolm Ramsay	page 76
6.1	Poster for the Federal Theatre's production of Spirochete in	
	Chicago (1938)	89
6.2	Julie Hesmondhalgh as Vivian Bearing in Margaret Edson's	
	Wit (Manchester Royal Exchange Theatre, 2016).	95
12.1	Marjana and the Forty Thieves stages an evolution in our	
	conceptual system from thinking about individuals telling	
	stories to stories generating individuals. Anish Roy, black	
	microphone visible on his forehead, tells a version of the	
	story to a small group of spectators (Target Margin	
	Theatre, 2019; directed by David Herskovits)	183
13.1	Fontenelle, Conversations on the Plurality of Worlds	190
13.2	Engraving of the last act of Les Noces de Pélée et Thétis,	
	set design by Torelli	190
14.1	Theatrical patent for Loie Fuller's serpentine dance	
	mechanisms	214
14.2	Theatrical patent for Loie Fuller's invention of simulated	
	flames	215

vii

### CONTRIBUTORS



viii

#### ACKNOWLEDGEMENTS

My thanks go first and foremost to the contributors to this book, with whom it has been a privilege and a pleasure to work and from whom I have learned so much. Their ideas and their commitment are inspiring.

I also wish to thank my editors at Cambridge University Press: Kate Brett, who first suggested this book to me, and Emily Hockley and Eilidh Burrett, who have patiently and expertly guided the book through to completion. I am also grateful to Alexandra Paddock, Katherine Gurnos-Davies, and Niall Summers for their invaluable editorial assistance. Environment is key to any book project, and the Faculty of English and St Catherine's College, Oxford provided unparalleled intellectual as well as physical spaces in which to think, write, and exchange ideas for this book.

Chapter 14 is the result of several stages of testing out ideas: first, in a talk I presented to the American Chemical Society on theatre's engagement with chemistry, specifically stage lighting; then as a presentation on backstage labour to a conference at the University of Warwick on nineteenth-century theatre; finally, as a keynote address I gave at the 2018 British Society for Literature and Science conference, Oxford Brookes University. My thanks to all of these organizations, particularly the BSLS, for the opportunity to explore my ideas. I am also indebted to Jane R. Goodall for her careful reading of the chapter in draft and her suggestions, all of which have strengthened it, and to David Wilmore of **theat***resarch* consultancy for providing high-quality images of the theatrical patents shown here.

Finally, my warmest thanks and gratitude go to my family, near and far, especially Graham, Callum, Gavin, and Alastair. This book is for you.

## CAMBRIDGE

Cambridge University Press 978-1-108-47652-2 — The Cambridge Companion to Theatre and Science Edited by Kirsten E. Shepherd-Barr Frontmatter <u>More Information</u>