HOW DATA NEED PEOPLE

From genome sequencing to large sky surveys, digital technologies produce massive datasets that promise unprecedented scientific insights. But data, for being good to use and reuse, need people – scientists, technicians, and administrators – as embodied, evaluative, social humans. In this book, anthropologist Götz Hoeppe draws on an ethnography of astronomical research to examine the media and practices that scientists and technicians use to instruct graduate students, make diagrams for data calibration and discovery, organize collaborative work, negotiate the ethics of open access, encode their knowledge in datasets – and undertake social inquiries along the way. This book offers a reflection on the sociality of data-rich research that will benefit attempts to integrate human and machine learning. It will be of interest for students and scholars in data science and science and technology studies, as well as in anthropology, sociology, history, and the philosophy of science. This book is also available Open Access on Cambridge Core.

GÖTZ HOEPPE is Associate Professor of Sociology at the University of Waterloo, Canada. He is the author of *Conversations on the Beach: Fishermen's Knowledge, Metaphor and Environmental Change in South India* (2007) and *Why the Sky is Blue: Discovering the Color of Life* (2007), which received the American Meteorological Society's Louis J. Battan Author's Award.

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"*How Data Need People* convincingly exemplifies why patient ethnographic studies are so needed today. I recommend the book as a model to everyone interested in practices of science."

Morana Alač, University of California, San Diego

"Hoeppe joins scientific teams and studies them from the inside. He convincingly argues that junior scientists also effectively become ethnographers when being trained in their work, in the implicit knowledge in their subfields, and in the expectations of their profession."

David W. Hogg, New York University

"This is the first long-term ethnographic study of how one of the oldest sciences we have, astronomy, lives a data-centric life today. A must-read not just for science and technology studies and the social sciences, but all data-focused fields and operations inside and outside the sciences."

Karin Knorr Cetina, University of Chicago

"Götz Hoeppe has become a leading sociologist of science because he grounds his inquiries in real-world field research where he identifies the local details of scientific work. In this ethnographically rich study Hoeppe explains to us what it is scientists do with digital data in order to make it science."

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The Social and Epistemic Practice of a Data-Rich Science

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University of Waterloo

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Shaftesbury Road, Cambridge CB2 8EA, 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

Cambridge University Press is part of Cambridge University Press & Assessment,
a department of the University of Cambridge.

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www.cambridge.org
Information on this title: www.cambridge.org/9781009686723
DOI: 10.1017/9781009686754

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When citing this work, please include a reference to the DOI 10.1017/9781009686754

First published 2026

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

A Cataloging-in-Publication data record for this book is available from the Library of Congress

ISBN 978-1-009-68672-3 Hardback
ISBN 978-1-009-68673-0 Paperback

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