

Cambridge Elements =

Elements in the Philosophy of Science edited by Jacob Stegenga University of Cambridge

PHILOSOPHY OF OPEN SCIENCE

Sabina Leonelli University of Exeter







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

103 Penang Road, #05-06/07, Visioncrest Commercial, Singapore 238467

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

We share the University's mission to contribute to society through the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org
Information on this title: www.cambridge.org/9781009416399

DOI: 10.1017/9781009416368

© Sabina Leonelli 2023

This work is in copyright. It is subject to statutory exceptions and to the provisions of relevant licensing agreements; with the exception of the Creative Commons version the link for which is provided below, no reproduction of any part of this work may take place without the written permission of Cambridge University Press & Assessment.

An online version of this work is published at doi.org/10.1017/9781009416368 under a Creative Commons Open Access license CC-BY-NC 4.0 which permits re-use, distribution and reproduction in any medium for non-commercial purposes providing appropriate credit to the original work is given and any changes made are indicated. To view a copy of this license visit https://creativecommons.org/licenses/by-nc/4.0

All versions of this work may contain content reproduced under license from third parties.

Permission to reproduce this third-party content must be obtained from these third-parties directly.

When citing this work, please include a reference to the DOI 10.1017/9781009416368

First published 2023

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

ISBN 978-1-009-41639-9 Paperback ISSN 2517-7273 (online) ISSN 2517-7265 (print)

Cambridge University Press & Assessment 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.



Philosophy of Open Science

Elements in the Philosophy of Science

DOI: 10.1017/9781009416368 First published online: July 2023

> Sabina Leonelli University of Exeter

Author for correspondence: Sabina Leonelli, s.leonelli@exeter.ac.uk

Abstract: The Open Science (OS) movement aims to foster the wide dissemination, scrutiny and reuse of research components for the good of science and society. This Element examines the role played by OS principles and practices within contemporary research and how this relates to the epistemology of science. After reviewing some of the concerns that have prompted calls for more openness, it highlights how the interpretation of openness as the sharing of resources, so often encountered in OS initiatives and policies, may have the unwanted effect of constraining epistemic diversity and worsening epistemic injustice, resulting in unreliable and unethical scientific knowledge. By contrast, this Element proposes to frame openness as the effort to establish judicious connections among systems of practice, predicated on a process-oriented view of research as a tool for effective and responsible agency. This title is also available as Open Access on Cambridge Core.

Keywords: research practice, equity in research, diversity in research, Open Society, science policy

© Sabina Leonelli 2023

ISBNs: 9781009416399 (PB), 9781009416368 (OC) ISSNs: 2517-7273 (online), 2517-7265 (print)



Contents

1	Introduction	1
2	Rethinking Communication: Research in a Changing World	9
3	Rethinking Practice: Challenges of Open Science Implementation	20
4	Rethinking Values: Diversity and Justice Across Systems of Practice	28
5	Rethinking the Philosophy of OS	43
6	Conclusion	65
	References	71