Narrative Science

Narrative Science examines the use of narrative in scientific research over the last two centuries. It brings together an international group of scholars who have engaged in intense collaboration to find and develop crucial cases of narrative in science. Motivated and coordinated by the Narrative Science Project, funded by the European Research Council, this volume offers integrated and insightful essays examining cases that run the gamut from geology to psychology, chemistry, physics, botany, mathematics, epidemiology and biological engineering. Taking in shipwrecks, human evolution, military intelligence and mass extinctions, this landmark study revises our understanding of what science is, and the roles of narrative in scientists' work. This title is also available as Open Access.

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Narrative Science

Reasoning, Representing and Knowing since 1800

Edited by

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MAT PASKINS works for a charity and has a PhD in the history of science. They have written about the relations between the history of science and voluntary associations, the role of tree-planting in British politics and notions of improvement and histories of chemistry and material sciences. Mat is also interested in relations between science and literature and has co-edited two anthologies of narrative science.

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Preface and Acknowledgements

We began the Narrative Science Project with the aim of finding and analysing narratives as they occurred in the disparate and varied sites offered across the terrain of as many natural/physical/human/social sciences as we could. We did not aim to be comprehensive, for science exists in too many guises, and nor did we assume all science was narrative. But as our project progressed we came to recognize both how surprisingly widespread narratives were in science, and how they are shown in diagrams, maps and equations as well as told in texts, protocols, books and journal articles. We did not aim to impose an account of narrative onto science, but rather to explore the different narrative formats that scientists use, and the different functions that narrative fulfils for those scientists. We did not aim to create a well-researched map, but our detailed casework created a picture with the features of a medieval tapestry: exhibiting both the detailed texture of many individual science narratives and the amazing spread of how narrative appears in science.

Our second starting ambition was to persuade both literary communities who study narrative, and science studies communities who study science, 'to take narrative science seriously'. This caused us to walk several tightropes at once. First, we were all too conscious – from typical reactions – that putting narrative and science together is problematic, for narrative is almost automatically associated with stories, and thence with something fictional. To mitigate this, we have largely kept to the terminology 'narrative'. Second, was the tendency to assume that we were interested in narrative as a public engagement device that enabled the public to understand science, whereas we were interested in how scientists use narrative within their own communities, scientist-to-scientist, for their own purposes. Third, literary scholars sometimes assumed that either our interests were focused on factual narratives, or on the literariness of scientific prose. Narratives in science may be about facts, but may be about theories, or even both at once, and we were not primarily interested in literary qualities or the range of literary devices used by scientists. Instead, our engagement with the narrative community has been to understand how narrative functions to create joined-up accounts of things in particular domains (in our case, the various domains of science), and in what makes such relatedness

'tellable'. Fourth (although this only became clearly evident as we went along), our interests covered not just the predictable places of narrative in reporting the process of scientific research activities and outcomes, or the life histories of scientific phenomena, but the ways in which narrative plays an important role in doing science. Thus, to our constituencies in history and philosophy of science, we propose that narrative-making shows its power in making sense of a phenomenon, and in so doing becomes a part of scientific reasoning, argument and inference.

What became the 'our' in our team is a critical part of our narrative-science project. We assembled a 'home team' from history and philosophy of science and literary studies (each person also held knowledge of at least one science field) and drew extensively on the help of intellectual interlocuters from the pre-history of the project. These conversations go back to an early meeting (in 2013), generously hosted by Raine Daston at the Max Planck Institute of the History of Science, and forward to the special issue of *SHPS* (published in 2017). Then, over the five years of our project time (2016–21), 'our team' widened to embrace an incredible range of scholars who came to deliver seminars, provided papers at our specialist workshops, joined us in specially constructed symposium sessions at conferences, and who contributed cases and commentaries to our Anthologies and working papers. Together they constituted a community extending and enriching the Narrative Science Project in creating both this book and the multiple further resources on our project website www.narrative-science.org/. Without them, our narrative science tapestry would be restricted in range, thin in colour and lacking depth of conviction. We thank them all below (and apologize if our listing misses any of our wider team!), as well as the 'anonymous' reviewers of our book chapters and the book as a whole.

'Intellectutors'

Norton Wise, Jim Griesemer, Raine Daston, Sharon Crasnow, John Beatty, Brian Hurwitz, Ted Porter, Naomi Oreskes, Chiara Ambrosio, Mary Terrall, Greg Priest, Paul Roth, Roman Frigg and Sabina Leonelli.

Workshop Speakers

Puzzles and Problems of Classifying and Categorizing

Staffan Mülle-Wille, Yossi Lichtenstein, Andrea Woody, Jan-Willem Romeijn, Santi Funari and Rachel Ankeny.

Narrative Science and Its Visual Practices

Mirjam Brusius, Elizabeth Haines, Nina Kranke, Nicola Williams, Annamaria Carusi and Jonathan Gray.

Expert Narratives: Systems, Polices and Practices

Andrea Mennicken, Brendan Clarke, Hannah Roscoe, Chris Hall, Shana Vijayan, Lars Bo Henriksen and Natasha McCarthy.

Narratives as Navigation Tools

Martin Stahl, Rebecca Wilbanks, Sabine Baier, Cathal Cummins, Miguel Garcia-Sancho and Karen Polizzi.

Does Time Always Pass? Temporalities in Scientific Narratives

Norton Wise, John Beatty, Dorothea Debus, Paula Olmos, Rosa Hardt, William Matthews, John Huss, Teru Miyake, Anne Teather, Elspeth Jajdelska, Thomas Bonnin, Tirthankar Roy and Daniel Pargman.

Scientific Polyphony: How Scientific Narratives Configure Many 'Voices'

Debjani Bhattacharyya, Devin Griffiths, Isabelle Kalinowski, Birgit Lang, Harro Maas, Jill Slinger, Lotte Bontje and Rhianedd Smith.

Narrative Science in Techno-Environments

Ina Linge, Jean-Baptiste Gouyon, Amelie Bonney, Ross Brooks, Louise Coueffe, Greg Lynall, John Lidwell-Durnin, Harriet Ritvo, Saliha Bayir, Ágota Ábrán, João P. R. Joaquim, Ellie Armstrong, Aadita Chaudhury, Mauricio Nicolas Vergara, Sarah Bezan, Charlotte Sleigh, Animesh Chatterjee, sam smiley, Sarah Daw, Lachlan Fleetwood, Jon Agar, Anahita Rouyan and Alexander Hall.

Narrative and Mathematical Argument

David Corfield, Michael Friedman, Line Edslev Andersen, Mikkel Willum Johansen, Henrik Kragh Sørensen, Fenner Tanswell, Karine Chemla and Stephanie A. Dick.

Anecdotes: Little Narratives That Carry Bigger Weight

Brian Hurwitz, Martin Böhnert and Guillaume Yon.

Speakers in the Public Seminar Series

Sally Atkinson, Elisa Vecchione, Julia Sánchez-Dorado, Claudia Cristalli, Caitlin Donahue Wylie, Sigrid Leyssen, Lukas Engelmann, Sabine Baier, Sharon Crasnow, Phyllis Kirstin Illari, Ivan Flis, Adrian Currie, Alfred Nordmann, Eleanore Loiodice, Annamaria Contini, Adelene Buckland, Sarah Dillon, Vito De Lucia, Marco Tamborini, Staffan Müller-Wille, Neil Tarrant, Heieke Hartung, Sally Horrocks, Paul Merchant, Emily Hayes, Veronika Lipphardt, Will Tattersdill and Lorraine Daston.

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Home Team

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