



HEALTH, TECHNOLOGY AND SOCIETY

# Health, Technology and Society

Critical Inquiries

Edited by  
**Andrew Webster**  
**Sally Wyatt**

palgrave  
macmillan

# Health, Technology and Society

## **Series Editors**

Andrew Webster  
Department of Sociology  
University of York  
York, UK

Sally Wyatt  
Faculty of Arts and Social Sciences  
Maastricht University  
Maastricht, Limburg, The Netherlands

Medicine, health care, and the wider social meaning and management of health are undergoing major changes. In part this reflects developments in science and technology, which enable new forms of diagnosis, treatment and delivery of health care. It also reflects changes in the locus of care and the social management of health. Locating technical developments in wider socio-economic and political processes, each book in the series discusses and critiques recent developments in health technologies in specific areas, drawing on a range of analyses provided by the social sciences. Some have a more theoretical focus, some a more applied focus but all draw on recent research by the authors. The series also looks toward the medium term in anticipating the likely configurations of health in advanced industrial society and does so comparatively, through exploring the globalization and internationalization of health.

More information about this series at  
<http://www.palgrave.com/gp/series/14875>

Andrew Webster • Sally Wyatt  
Editors

# Health, Technology and Society

Critical Inquiries

palgrave  
macmillan

*Editors*

Andrew Webster  
Dept of Sociology, W/231C  
University of York, Wentworth College  
Heslington, UK

Sally Wyatt  
Faculty of Arts and Social Sciences  
Maastricht University  
Maastricht, Limburg, The Netherlands

Health, Technology and Society

ISBN 978-981-15-4353-1

ISBN 978-981-15-4354-8 (eBook)

<https://doi.org/10.1007/978-981-15-4354-8>

© The Editor(s) (if applicable) and The Author(s), under exclusive licence to Springer Nature Singapore Pte Ltd. 2020

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors, and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Cover illustration © SEAN GLADWELL

This Palgrave Macmillan imprint is published by the registered company Springer Nature Singapore Pte Ltd.

The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

*To our grandchildren,  
for whom the politics and health of the planet and so of its people will be the  
most fundamental concern*

# Foreword

Medicine, healthcare and the wider social meanings and management of health are continually in the process of change. While the ‘birth of the clinic’ heralded the process through which health and illness became increasingly subject to the surveillance of medicine, for example, surveillance has become more complex, sophisticated and targeted—as seen in the search for ‘precision medicine’ and now ‘precision public health’. Both surveillance and health itself emerge as more provisional, uncertain and risk-laden as a consequence, and we might also ask what now constitutes ‘the clinic’, how meaningful a concept of a clinic ultimately is and where else might we now find (or not find) healthcare spaces and interventions.

Ongoing developments in science and technology are helping to enable and propel new forms of diagnosis, treatment and the delivery of healthcare. In many contexts, these innovations both reflect and further contribute to changes in the locus of care and burden of responsibility for health. Genetics, informatics and imaging—to name but a few—are redefining collective and individual understandings of the body, health and disease. At the same time, long-established and even ostensibly mundane technologies and techniques can generate ripples in local discourse and practices as ideas about the nature and focus of healthcare shift in response to global debates about, for instance, One Health and Planetary Health.

The very technologies that (re)define health are also the means through which the individualisation of healthcare can occur—through, for instance, digital health, diagnostic tests and the commodification of restorative tissue. This individualisation of health is both culturally derived and state-sponsored, as exemplified by the promotion of ‘self-care’. These shifts are simultaneously welcomed and contested by professionals, patients and wider publics. Hence they at once signal and instantiate wider societal ambivalences and divisions.

This Series explores these processes within and beyond the conventional domain of ‘the clinic’ and asks whether they amount to a qualitative shift in the social ordering and value of medicine and health. Locating technical use and developments in wider socio-economic and political processes, each book discusses and critiques the dynamics between health, technology and society through a variety of specific cases, and drawing on a range of analyses provided by the social sciences.

The Series has already published more than 20 books that have explored many of these issues, drawing on novel, critical and deeply informed research undertaken by their authors. In doing so, the books have shown how the boundaries between the three core dimensions that underpin the whole Series—health, technology and society—are changing in fundamental ways.

Since 2006, this Series has been edited by Andrew Webster (University of York) and Sally Wyatt (Maastricht University). Through their stewardship, it has broken new empirical and conceptual ground. This volume takes stock of the Series to-date, and its contents provide a vivid demonstration of the vitality of the scholarship that Andrew and Sally have convened these last 14 years. It is also, then, a tribute to their work, dedication and thoughtfulness in cultivating research and writings that have had deep traction with a range of disciplines (not least, science and technology studies), and which have cast a bright light on the transformations in health, technology and society that are experienced by millions.

This volume draws together all of the books from across the years of the Series, organised around five key themes identified by Andrew and Sally to reflect the rich and diverse landscape the HTS Series has covered. Selecting key books and highlights from these, Andrew and Sally asked authors to provide reflections on their work. As such, the volume not

only brings together an overview and highlights of the Series but through the reflection pieces also gives a wider context and a form of history of the field during this time. Including fascinating stories of book development, response following publication, changes to the field and other directions such books may have taken, the reflection pieces illustrate the added value of bringing together the diverse works highlighted by this collection: the HTS Series *does* something in itself—books lead and tie into each other and a landscape of work and thinking in this field becomes greater than the sum of its parts. We look forward to being able to continue to build on the hard work undertaken by Andrew and Sally in developing the Series, and to working with, what we hope will be, a wide range of authors and novel topics.

London, UK  
Edinburgh, UK

Rebecca Lynch  
Martyn Pickersgill

# Contents

<b>Introduction</b>	1
<i>Andrew Webster and Sally Wyatt</i>	
Early Days and the Focus of the Series	3
The Normative and Methodological Contributions of the Series	5
Structure of the Book	8
Looking Ahead	10
References	11
<b>Section 1: Innovation</b>	15
<i>Marianne Boenink, Harro van Lente, Ellen Moors, Nelly Oudshoorn, John Gardner, Ellen Balka, Eileen Green, Flis Henwood, Rebecca Lynch, and Conor Farrington</i>	
Introduction	15
Marianne Boenink, Harro van Lente and Ellen Moors. (Eds.) (2016). <i>Emerging Technologies for Diagnosing Alzheimer's Disease. Innovating with Care</i> . Winner of the 2018 Chris Freeman Award, European Association for the Study of Science and Technology	19
Nelly Oudshoorn. (2011). <i>Telecare Technologies and the Transformation of Healthcare</i> . Winner of Foundation for the Sociology of Health and Illness Book Prize 2012	32
John Gardner. (2017). <i>Rethinking the Clinical Gaze: Patient-Centred Innovation in Paediatric Neurology</i>	37

Ellen Balka, Eileen Green and Flis Henwood. (Eds.). (2009). <i>Gender, Health and Information Technology in Context</i>	43
Rebecca Lynch and Conor Farrington. (Eds.). (2018). <i>Quantified Lives and Vital Data. Exploring Health and Technology Through Personal Medical Devices</i>	56
References	69
<b>Section 2: Responsibility</b>	75
<i>Kirstine Zinck Pedersen, Gerard de Vries, Klasien Horstman, Simone Bateman, Sylvie Allouche, Jérôme Goffette, Michela Marzano, Roma Harris, Nadine Wathen, and Sally Wyatt</i>	
Introduction	75
Kirstine Zinck Pedersen. (2018). <i>Organizing Patient Safety: Failsafe Fantasies and Pragmatic Practices</i> , pp. 128–131, 221, 240–244	79
Gerard de Vries and Klasien Horstman. (Eds.). (2008). <i>Genetics from Laboratory to Society. Societal Learning as an Alternative to Regulation</i>	91
Simone Bateman, Jean Gayon, Sylvie Allouche, Jérôme Goffette and Michela Marzano. (Eds.). (2015a). <i>Inquiring into Human Enhancement. Interdisciplinary and International Perspectives</i>	105
Roma Harris, Nadine Wathen and Sally Wyatt. (Eds.). (2010). <i>Configuring Health Consumers. Health Work and the Imperative of Personal Responsibility</i>	119
References	131
<b>Section 3: Locus of Care</b>	135
<i>Alan Petersen, Megan Munsie, Claire Tanner, Casimir MacGregor, Jane Brophy, Nadine Wathen, Roma Harris, Sally Wyatt, Bernike Pasveer, Oddgeir Synnes, and Ingunn Moser</i>	
Introduction	135
Alan Petersen, Megan Munsie, Claire Tanner, Casimir MacGregor and Jane Brophy. (2017). <i>Stem Cell Tourism and the Political Economy of Hope</i> . Winner of Stephen Crook Memorial Prize awarded by The Australian Sociological Association 2018	139

Nadine Wathen, Sally Wyatt and Roma Harris (Eds.). (2008). <i>Mediating Health Information. The Go-Betweens in a Changing Socio-Technical Landscape</i>	152
Bernike Pasveer, Oddgeir Synnes and Ingunn Moser. (Eds.). (2020). <i>Ways of Home Making in Care for Later Life</i>	167
References	179
<b>Section 4: Knowledge Production</b>	181
<i>Caragh Brosnan, Jenny-Ann Brodin Danell, Pia Vuolanto, Mike Michael, Marsha Rosengarten, Margaret Sleeboom-Faulkner, and Jessica Mesman</i>	
Introduction	181
Caragh Brosnan, Jenny-Ann Brodin Danell and Pia Vuolanto. (Eds.) (2018). <i>Complementary and Alternative Medicine. Knowledge Production and Social Transformation</i>	185
Mike Michael and Marsha Rosengarten. (2013). <i>Innovation and Biomedicine: Ethics, Evidence and Expectation in HIV</i>	196
Margaret Sleeboom-Faulkner. (2014). <i>Global Morality and Life Science Practices in Asia</i>	204
Jessica Mesman. (2008). <i>Uncertainty in Medical Innovation. Experienced Pioneers in Neonatal Care</i> . Winner of Foundation for the Sociology of Health and Illness Book Prize 2009	212
References	225
<b>Section 5: Regulation and Governance</b>	229
<i>Alex Faulkner, Courtney Davis, John Abraham, Andrew Webster, Brian Salter, and Catherine Waldbly</i>	
Introduction	229
Alex Faulkner. (2009). <i>Medical Technology into Healthcare and Society</i>	232
Courtney Davis and John Abraham. (2013). <i>Unhealthy Pharmaceutical Regulation</i>	245
Andrew Webster. (Ed.) (2013). <i>The Global Dynamics of Regenerative Medicine: A Social Science Critique</i>	259

Herbert Gottweis, Brian Salter and Catherine Waldby. (2009). <i>The Global Politics of Human Embryonic Stem Cell Science. Regenerative Medicine in Transition</i>	273
References	290
<b>References</b>	297
<b>Index</b>	315

## Notes on Contributors

**John Abraham** is Professor of Sociology in the Department of Global Health and Social Medicine at King's College London, UK. He has led numerous Economic and Social Research Council (ESRC)- and Wellcome Trust-funded research projects on various aspects of pharmaceuticals and health policy. As Specialist Expert Adviser to the UK House of Commons Parliamentary Health Select Committee, he was centrally involved in its *Inquiry into the Influence of the Pharmaceutical Industry* (2005), which was the most comprehensive and wide-ranging Parliamentary investigation of the pharmaceutical sector since 1914. He has chaired many ESRC Research Grants Assessment Panels, as well as serving on the ESRC's Grants Delivery Group, and as Vice-Chair of the ESRC Research Seminars Competition Panel. He has also delivered lectures to the World Health Organization, Social Science & Health Research Councils of Canada (GERSO), International Society of Pharmacovigilance, Royal College of Psychiatrists, European Congress of Toxicology, European Science Foundation, British Medical Association, INFARMED, the International Society of Social Pharmacy, Basel Institute on Governance, European Commission MEDUSE programme at University of Liege and the All-Party UK Parliamentary Group on Corporate Responsibility.

**Sylvie Allouche** holds a PhD in Philosophy and has worked as an assistant professor or researcher in various French and European universities

(Paris, Lyon, Budapest, Toulon, Bristol, Troyes). She is an associate professor at the General Biology Laboratory (Ecole Pratique de Hautes Etudes/Universite Catholique de Lyon (EPHE/UCLy)), Lyon Catholic University, France, where she is also a co-holder of the Chair 'Innovation, Responsibility, Humanity' and coordinator of the Erasmus+ Jean Monnet programme 'Europe in Interculturality'. Her research develops along two complementary directions: (1) the various philosophical issues raised by the prospect of engineering living organisms, with a special interest for human enhancement, geo-engineering and digital ethics; and (2) the relations between philosophy and fiction, science fiction and TV series in particular.

**Ellen Balka** is a professor at Simon Fraser University's School of Communication and the associate dean (Research) of the University's Faculty of Communication, Art and Technology, Vancouver, Canada. Early in her career, her interest in gender and technological change led her to the health sector, where she has conducted numerous ethnographic studies focused on the challenges of designing, implementing and using varied technologies in healthcare. Her most recent work has focused on participatory design of an adverse drug event reporting system which bridges the informational continuity of care gap between acute care settings and community pharmacies. The system is currently being implemented in one of British Columbia's health authorities.

**Simone Bateman** is a sociologist and is an Emeritus Senior Researcher at the Centre for Research on Medicine, Science, Health, and Society (CERMES3) of the French National Centre for Scientific Research (CNRS), Paris, France. Her research focuses on how societies deal with the practical and moral controversies raised by innovative medical and scientific practices, especially in the areas of fertility and reproduction and other closely related areas (neonatology, embryo research, genetics, genomics, human experimentation). Her work also examines bioethics as a historically specific social phenomenon. She was a member of the French National Ethics Committee from 1992 to 1996.

**Marianne Boenink** is an associate professor in the Department of Philosophy, University of Twente, the Netherlands, specialising in phi-

losophy and ethics of emerging biomedical technologies. Her research concerns the conceptual and normative analysis of visions and trends in biomedicine, with a particular focus on diagnostic and prognostic technologies. In addition, she has an interest in responsible innovation, for example by developing methods for meaningful involvement of stakeholders in societal and ethical deliberations on technologies in the making. She is the director of the international MSc programme in Philosophy of Science, Technology and Society at the University of Twente.

**Jenny-Ann Brodin Danell** is Associate Professor of Sociology at Umeå University, Sweden. Her research focuses on different aspects of complementary and alternative medicine, especially on knowledge production, and how different kinds of actors (such as users, researchers and politicians) are involved in negotiations on scientific and medical credibility. Her recent project on this matter was funded by the Swedish Science Foundation.

**Jane Brophy** is Postdoctoral Research Fellow in Public Policy at the University of Melbourne School of Government, Australia. Her interdisciplinary research spans medical sociology, science and technology studies and Asian studies. Her research explores the social dynamics that underpin the development of markets for new and emerging biotechnologies in the context of globalisation. Her PhD research examined the moral economy of the market for unproven stem cell treatments in China, and her current work focuses on the social and policy implications of the birth of genetically edited babies in China.

**Caragh Brosnan** is Associate Professor of Sociology at the University of Newcastle, Australia. Her work explores identity, power and the construction of legitimate knowledge in the scientific and health professions. Her recent projects have focused on complementary and alternative medicine in the university. She has written three edited collections: *Handbook of the Sociology of Medical Education* (2009, with Bryan Turner), *Bourdieuian Prospects* (2017, with Lisa Adkins and Steven Threadgold) and *Complementary and Alternative Medicine: Knowledge Production and Social Transformation* (Palgrave Macmillan, 2018, with Pia Vuolanto and Jenny-Ann Brodin Danell).

**Courtney Davis** is a reader in the Department of Global Health and Social Medicine at King's College London, UK. She undertakes international comparative research on trends in the regulation of pharmaceutical safety, efficacy, cost-effectiveness and innovation, and has broad research interests in the intersections of science and technology policy, business regulation and public health.

**Conor Farrington** is a senior research associate at THIS Institute, University of Cambridge School of Clinical Medicine, UK. His work focuses on the medical, sociological and philosophical implications of new medical technologies, especially wearable technologies such as 'artificial pancreas' systems for people with Type 1 diabetes. He is particularly interested in the application of organisational theories, such as Karl Weick's 'sensemaking' approach, to pressing questions of variable technology experience on the part of multiple stakeholders. His current work extends research on user experience of medical devices to embrace clinician perspectives, attempting to explore the range of clinical opinion regarding the introduction of future machine-learning technologies into mainstream care in England.

**Alex Faulkner** is Professor of Sociology of Biomedicine and Healthcare Policy at the Centre for Global Health Policy, University of Sussex, UK. His research theorises the regulation, valuation and uptake of technologies such as regenerative medicine, biomedical devices, bioinformatics and 3D bioprinting in the UK, EU and India. He has recently investigated bio-therapies in elite sport and collaborated with a patient organisation to analyse Lyme disease policy in the UK.

**John Gardner** is a senior lecturer in the School of Social Sciences at Monash University, Melbourne, Australia. He is trained in sociology and STS (science and technology studies) and his research focuses primarily on the social dimensions of medical innovation in healthcare. His research investigates how social values and expectations shape innovation processes, and it examines the social and ethical aspects of new medical technologies. Much of his work has focused on translational neuroscience, particularly neurotechnologies such as deep brain stimulation (DBS). The aim of his research is to draw on social science methodologies to facilitate responsible research and innovation.

**Jérôme Goffette** is Associate Professor of Philosophy at Claude Bernard University Lyon 1, France, and a member of the research unit on Environment, City and Society (EVS) of the French National Centre for Scientific Research (CNRS), Lyon. His research focuses primarily on anthropotechnics and human enhancement, a topic to which he has dedicated many articles and a book *Naissance de l'anthropotechnie* [Birth of anthropotechnics] (2006). His other areas of research concern the body schema, the imaginary of the body and the significant development of prosthetics. His present work explores the impact of human modification practices on our concrete lives.

**Eileen Green** is Emerita Professor of Sociology at Teesside University, England, UK, where she was the Founding Director of the Centre for Social and Policy Research which specialised in community action projects. Her research interests include gender studies, young people and risk, women's health and leisure and digital sociology. She has written widely in the area of women and gendered technology. She is a past Chair of the British Sociological Association and holds an Honorary Professorial Fellowship at the University of Warwick. Green has been a fellow of the Academy of Social Sciences since 2001 and is an elected member of Academy of the Social Sciences (AcSS) Council.

**Roma Harris** is Professor Emerita retired from the Faculty of Information and Media Studies at the University of Western Ontario in London, Canada. She lives in a small tourist village on the shores of Lake Huron in a sparsely populated rural area where she is witness to the power of info(r)mediation on the health and well-being of local people, particularly as it is facilitated by the presence of a much-loved public library. Using the library's meeting space, interested community members have launched a wide range of activities, events and programmes, all of which, in unique ways, reduce isolation and loneliness, strengthen social networks and build connecting ties of information exchange and caring.

**Flis Henwood** is Professor of Social Informatics in the School of Applied Social Science, University of Brighton, UK. Her early research focused on gender-technology relationships and, later, on sociotechnical critiques of digital health. The edited collection *Gender, Health and Information*

*Technology in Context* (co-edited with Ellen Balka and Eileen Green in 2009) sits at the intersection of these two areas of interest. She has written widely on the relationship between information, technology and care and is the Joint Chief Editor of the journal *Sociology of Health and Illness* and co-editor of the 26th SHI monograph *Digital Health: Sociological Perspectives*, published in 2019.

**Klasien Horstman** is Full Professor of ‘Philosophy of Public Health’ at the Faculty of Health, Medicine and Life Sciences, Maastricht University, the Netherlands. She studies the dynamics of science, politics and society in diverse public health practices, like (work place) health promotion, vaccination, antibiotic resistance prevention and urban health. She coordinated the Erasmus programme *Bridging Innovations, Health and Societies: Educational Capacity Building in the Eastern European Neighbouring Areas* (2015–2018) and was the co-editor of the book *Health, Technologies, and Politics in Post-Soviet Settings: Navigating Uncertainties* (Palgrave Macmillan, 2018). She has written several Dutch reports for the Municipality of Maastricht about policies and practices of safety, health, care and housing, and developed an urban health living lab in a disadvantaged neighbourhood, *University with the Neighborhood*.

**Harro van Lente** is Professor of Science and Technology Studies and head of department at the Faculty of Arts and Social Sciences, Maastricht University, the Netherlands. He is one of the founding fathers of the Sociology of Expectations, which studies how representations of the future shape current socio-technical developments. His research concerns how emerging technologies—such as nanotechnology, hydrogen and medical technologies—produce novelties and needs. This involves technology assessment, foresight, politics of knowledge production and philosophy of technology. He is also Chair of the board of the Netherlands Graduate Research School of Science, Technology and Modern Culture (WTMC).

**Rebecca Lynch** is Research Fellow in Medical Anthropology at King’s College London, UK. She completed her PhD in Social Anthropology at University College London (UCL) and has undertaken ethnographic work in Trinidad and in the UK. Among other areas she has written on

different socio-cultural, moral and scientific constructions of the body, health and illness (including in public health and health services), and on bodily interaction with the non-human. She has edited three books that seek to expand approaches to the body and health through examinations of relations between human health and the non-human and through post-human approaches.

**Casimir MacGregor** is a medical anthropologist who specialises in the examination of science, technology and society (STS). His research draws upon theory and methods of anthropology, science and technology studies, and public health. To date his research has focused on ‘compassionate caring’ amongst emergency clinicians and their patients, ‘vulnerability’ in relation to pandemic influenza and ‘hope’ in relation to stem cell research and therapies. Recently his research has focused on ‘energy ethics’ in hospitals. His goal is to create dialogue between disciplines and co-create research with end-users to confront contemporary health challenges and pursue innovations in the practice of social science.

**Michela Marzano** is a philosopher and head of the Department of Social Sciences at the Paris Descartes—Paris V *University*. After studying Philosophy in Pisa and Rome, she obtained a PhD with a thesis on the status of the human body in contemporary society. In 1999, she moved to France and joined the Centre National de la Recherche Scientifique in 2000. She is particularly interested in moral philosophy and politics.

**Jessica Mesman** is Associate Professor of Science and Technology Studies (STS) and is the vice-dean at Maastricht University, the Netherlands. She has more than 25 years of experience in ethnographic studies in various countries in healthcare settings (mainly ICU, Surgery and Emergency). Her work on patient safety and that on ‘exnovation’, in particular, is nationally and internationally recognised as progressive by focusing on strengths of practices since the early 2000s. She has written widely on the topic and has been a visiting scholar at several international universities around the world. Mesman is considered to be one of the leading scholars in the area of video-reflexive ethnography (VRE). Besides her scholarly work she also offers master courses and team-training in this method for professionals in healthcare and education. Her publication

list includes several books and articles on this subject in close collaboration with other experts in this area. In addition, she is one of the initiators of establishing the VRE International Association (VREIA). On the basis of her expertise she is also officially affiliated with the Mayo Clinic in the USA.

**Mike Michael** is a Sociologist of Science and Technology, and a professor in the Department of Sociology, Philosophy and Anthropology, University of Exeter, England, UK. Research interests have touched on the relation of everyday life to technoscience, the use of design to develop a 'speculative methodology' and the role of aesthetics and affect in the making of publics. Recent publications include (co-authored with Andy Boucher et al.) *Energy Babble: Entangling Design and STS* (2018) and *Actor-Network Theory: Trials, Trails and Translations* (2017).

**Ellen Moors** is Professor of Innovation and Sustainability at the Copernicus Institute of Sustainable Development, Utrecht University, the Netherlands. Her research focuses on the dynamics and governance of technological innovations in science-based sectors in which emergent technology development occurs. She focuses especially on user-driven innovations and changing institutional arrangements in health, life sciences and novel food-related innovations. She also studies innovation-regulation issues, sustainable healthcare practices and responsible innovation. Moors is Director of Research of the Copernicus Institute of Sustainable Development and a member of the Dutch Advisory Council for Science, Technology and Innovation (AWTI).

**Ingunn Moser** is Professor of Sociology and Social Studies of Science, Technology and Medicine at VID Specialized University, Oslo, Norway. Her research is centred on uses of knowledge and technology in healthcare practices, and on relations between subjectivity, embodiment, materiality and different knowledge practices. These theoretical interests have been explored in empirical fields, ranging from disability via e-health and telecare to care for the elderly and dementia care in particular.

**Megan Munsie** is an associate professor and Deputy Director of the Centre for Stem Cell Systems at the University of Melbourne, Australia, where she leads the Ethics, Legal and Social Implications Program. She is

also head of the Engagement, Ethics and Policy Program of Stem Cells Australia, a national research initiative funded by the Australian Research Council. Munsie is a recent recipient of the highly esteemed International Society for Stem Cell Research 2018 Public Service Award.

**Nelly Oudshoorn** is Professor Emerita of Technology Dynamics and Health Care at the University of Twente, Netherlands. Her research interests and publications include the co-construction of technologies and users, with a particular focus on medical technologies. She is the author/co-editor of the following award-winning books, including *The Male Pill: A Biography of a Technology in the Making* (2003), *Telecare Technologies and the Transformation of Healthcare* (Palgrave Macmillan, 2011) and *The New Production of Users: Changing Innovation Collectives and Involvement Strategies* (2016, co-edited with Sampsa Hyysalo and Elgaard Jensen).

**Bernike Pasveer** is an assistant professor at the Faculty of Arts and Social Sciences, Maastricht University, the Netherlands. Her work focuses on analysing the socio-cultural, technological and biomedical specificities of handling the human body's so-called natural achievements such as becoming pregnant, giving birth, being talented, dying and belonging—which are also the topics of her past and current research projects. She is developing a research project into (mundane) practices of refuge and belonging.

**Kirstine Zinck Pedersen** is an associate professor in the Department of Organization, Copenhagen Business School, Denmark. Her research attends to the organisational, practical and ethical implications of recent managerial and technological transformations of the public sector and in particular to the constitutive effects and unintended consequences of quality and safety programmes in healthcare. Methodologically, these are studies that often combine ethnographic investigation or historical analysis with an analytical interest in American pragmatism, classic organisation theory and sociological perspectives on professional work, clinical judgement and public office holding.

**Alan Petersen** is Professor of Sociology and Gender Studies, School of Social Sciences, Monash University, Melbourne, Australia. His research areas cover the sociology of health and medicine, science and technology

and gender studies. His recent work, which is funded by the Australian Research Council, has focused on patients' use of digital health and on testing in healthcare. He is a fellow of Academy of Social Sciences, UK, and fellow of Academy of Social Sciences, Australia.

**Marsha Rosengarten** is Professor of Sociology in the Department of Sociology, Goldsmiths, University of London, UK. She is the author of *HIV Interventions: Biomedicine and the Traffic Between Information and Flesh* (2009), co-author with Mike Michael *Innovation and Biomedicine: Ethics, Evidence and Expectation in HIV* (Palgrave Macmillan, 2013) and with Alex Wilkie and Martin Savransky an edited collection *Speculative Research: The Lure of Possible Futures* (2017).

**Brian Salter** is Professor of Politics in the Department of Political Economy at King's College London, UK. His research deals with the political sociology of power in the domains of science, health and education focusing on the role of the state, ideology and markets in the control and governance of knowledge and innovation, applied to national and global contexts. In biomedicine he explores the global politics driving the governance response to new health technologies, the impact of the emerging economies and the role of bioethics in that process. Taking assisted reproductive technology as its empirical focus, his current research examines the politics driving the relationship between cultures, religions and global markets.

**Margaret Sleeboom-Faulkner** is Professor of Social and Medical Anthropology at the University of Sussex, Brighton, UK. Her work concerns processes of nation-state building in China and Japan and biotechnology and society in Asia. Her research projects concern international life science networks in the fields of biobanking and biomaterials, and stem cell therapies and experimentality (funded by the European Research Council (ERC) and Economic and Social Research Council (ESRC) respectively). In these projects she combines anthropological approaches and social studies of science.

**Oddgeir Synnes** is an associate professor at VID Specialized University, Oslo, Norway, and an associate professor II at Molde University College, Norway. His main research interests lie in the fields of health humanities,

narrative medicine and existential care. For several years, he has worked in practical as well as research projects on the use of creative writing and storytelling in palliative care, elderly care, dementia care and among young adults with psychosis.

**Claire Tanner** is a research fellow in the Ethics, Legal and Social Implications (ELSI) programme in the Centre of Stem Cell Systems at the University of Melbourne, Australia, where she coordinates an interdisciplinary research programme on science in society and the socio-ethical implications of new and emerging technologies. Her most recent research focus is on the emerging scientific field of mammalian cell synthetic biology and the socio-cultural and ethical meanings, discourses and scientific practices surrounding its development.

**Gerard de Vries** was Professor of Philosophy of Science at the University of Amsterdam, Netherlands, from 1997 to 2013, when he retired. From 2006 to 2014 he served as a Council Member at the Scientific Council for Government Policy, the think tank for long-term policy issues of the Dutch government in the Hague. He is a visiting fellow of Wolfson College, Cambridge. Previously, De Vries has also been Professor of Philosophy at Maastricht University (1987–1997) and Dean of the Netherlands Graduate Research School in Science, Technology and Modern Culture (1988–1997). His most recent book is *Bruno Latour*, published in 2016.

**Pia Vuolanto** is a sociologist and Scholar in Science and Technology Studies and Medical Sociology at Tampere University, Finland. Her research concentrates on the boundaries of biomedical and social scientific knowledge, health-related controversies and interdisciplinarity in the health research field. She works on sociology and history of CAM (Complementary and Alternative Medicine) and vaccine hesitancy, the development of CAM research, sociology of science and belief as well as the pressures of ignorance on expertise. She has publications in *Science and Technology Studies*, *Minerva* and *Scandinavian Journal of Public Health*.

**Catherine Waldby** is Director of the Research School of Social Sciences at the Australian National University, Australia. Her researches focus on social studies of biomedicine and the life sciences. She is the author of 55

research articles and 7 monographs in this area. Her recent books include *Clinical Labor: Tissue Donors and Research Subjects in the Global Bioeconomy* (with Melinda Cooper, 2014) and *The Oöcyte Economy: The Changing Meaning of Human Eggs* (2019). With Nikolas Rose and Hannah Landecker, she is the editor of *BioSocieties: An Interdisciplinary Journal for the Social Studies of Life Sciences*.

**Nadine Wathen** is a professor and Canada Research Chair in Mobilizing Knowledge on Gender-Based Violence at Western University, Canada, and is a research scholar at Western's Centre for Research and Education on Violence Against Women and Children. She is a member of the College of the Royal Society of Canada. Her research examines responses to gender-based violence, interventions to reduce health inequities and the science of knowledge mobilisation, with a focus on the use of research in policy and practice.

**Andrew Webster** is a professor in the Sociology of Science and Technology at the University of York, UK. He was founder and director of SATSU for 30 years. He has also directed various national research programmes on novel biomedical technologies and regenerative medicine. His main interest is in understanding how emergent technologies are, or are not, adopted in clinical settings, and through this work developed, with his colleague John Gardner, the model of 'institutional readiness' which is now adopted by National Health Service (NHS) Trusts introducing advanced therapies in the cell and gene therapy area. He is also Executive Secretary of Association for the Study of Innovation, Science and Technology (AsSIST-UK).

**Sally Wyatt** is Professor of Digital Cultures at Maastricht University, the Netherlands. Together with Anna Harris and Susan Kelly, she co-authored *Cybergenetics, Health Genetics and New Media* (2016). This book was awarded the Foundation for the Sociology of Health and Illness book prize in 2017. Wyatt's research focuses on digital technologies, and their use in healthcare and in the production of knowledge. She has been involved in the Netherlands Graduate Research School of Science, Technology and Modern Culture (WTMC), first as a coordinator of PhD training (2006–2010) and later as an academic director (2011–2017).



# Introduction

Andrew Webster and Sally Wyatt

This book is both a celebration and a reflection: it celebrates and captures examples of the excellent scholarship that the Health, Technology and Society (HTS) Series has published since 2006, and it reflects on how the field has developed over this time. As editors of the HTS Series who, in 2020, handed over the reins to our UK-based colleagues, Rebecca Lynch and Martyn Pickersgill, we thought it timely to create a text that told a story of the field, drawing from a variety of disciplinary perspectives and empirical domains. We also wanted to reflect on this work and so invited the authors and editors to describe how their original ideas have developed, how their specific areas of interest have moved on and to consider how their books were produced and received. This volume then is both a retrospective and prospective commentary on health and technology, one of the major areas of debate in the social sciences.

---

A. Webster (✉)

University of York, York, UK

e-mail: [andrew.webster@york.ac.uk](mailto:andrew.webster@york.ac.uk)

S. Wyatt

Maastricht University, Maastricht, The Netherlands

e-mail: [sally.wyatt@maastrichtuniversity.nl](mailto:sally.wyatt@maastrichtuniversity.nl)

© The Author(s) 2020

A. Webster, S. Wyatt (eds.), *Health, Technology and Society*, Health, Technology and Society, [https://doi.org/10.1007/978-981-15-4354-8\\_1](https://doi.org/10.1007/978-981-15-4354-8_1)

All the books in the Series address a number of broad themes. They show that medicine, health care and the wider social meaning and management of health are undergoing major changes. In part this reflects developments in science and technology, which enable new forms of diagnosis, treatment and the delivery of health care. It also reflects changes in the locus of care and burden of responsibility for health. Genetics, digital technologies, imaging and integrative technologies, such as nanotechnology, are redefining our understanding of the body, health and disease. Furthermore, health is no longer simply the domain of conventional medicine, nor the clinic. The ‘birth of the clinic’ heralded the process through which health and illness became increasingly subject to the surveillance of medicine. Although such surveillance is more complex, sophisticated and precise as seen in the search for ‘predictive medicine’ as well as ‘personalised medicine’, it is also more provisional, uncertain and risk laden.

The social management of health itself is losing its anchorage in collective social relations and shared knowledge and practice, whether at the level of the local community or through state-funded socialised medicine. This individualisation of health is both culturally driven and state sponsored, as the promotion of ‘self-care’ demonstrates. The very technologies that redefine health are also the means through which this individualisation can occur—through self-monitoring, diagnostic tests and the commodification of restorative tissue, such as stem cells, cloned embryos and so on.

The books in the HTS Series have explored these processes within and beyond the conventional domain of ‘the clinic’ and asked whether they amount to a qualitative shift in the social ordering and value of medicine and health. Locating technical developments in wider socio-economic and political processes, each book has examined recent developments within health technologies in specific areas, drawing on a range of analyses provided by the social sciences.

The Series has already published 21 books (plus 4 in preparation) that have explored many of these issues, drawing on novel, critical and deeply informed research undertaken by their authors. In doing so, the books have shown how the boundaries between the three core dimensions that

underpin the whole Series—Health, Technology and Society—are changing in fundamental ways.

How then to explore these changes? We decided that the best way would be to identify a number of themes that would help us to marshal the material across the empirical and conceptual range of material found in the Series. These have enabled us to organise the books by theme and so help the reader navigate the rich and substantively diverse landscape of HTS. The five themes are Innovation, Responsibility, Locus of Care, Knowledge Production and Regulation and Governance. We will present these in more detail below, but first we reflect on the origin of the Series and on some of its normative and methodological contributions.

## Early Days and the Focus of the Series

The origin of the Series goes back to the beginning of this century, when a major UK research programme (2000–2005), jointly funded by the Economic and Social Research Council and the Medical Research Council, brought together over 32 projects and almost 130 researchers to explore what were called ‘Innovative Health Technologies’. That research programme not only produced a very large number of papers but also culminated in a book, *New Technologies in Health Care* (2006), that somehow managed to convey the rich and diverse work that the programme supported. Both editors of the HTS Series were involved: Webster as coordinator of the programme and Wyatt as one of the project-based researchers. The Series was launched at an international event hosted by the Royal Society in London, and the story of that day can be found here: <https://www.york.ac.uk/res/iht/events/htsbooklaunch.htm>.

The impetus behind the programme then was a growing recognition that the social sciences needed to address in a more sustained and holistic way the current and future implications of innovative health technologies, the effects of which are mediated by wider processes of social change. Innovative health technologies (IHTs)—such as genetics, cloning, xenotransplantation and the internet—presented policy-makers and the public with major new concerns. For example, the then UK House of Commons Select Committee (3rd) Report on Human Genetics

recommended that there be a programme of research that examines the social implications of IHTs in a robust and detailed way. The Wellcome Trust also called for a specifically social science agenda to be developed which could complement the Trust's work on bioethics. The research programme subsequently funded by the ESRC and MRC did much to address these issues, and indeed many others, and the results are still available at <https://www.york.ac.uk/res/iht/introduction.htm>.

The HTS Series grew out of this earlier work, but with a much broader intellectual and geographical canvas at its disposal. Whereas the IHT programme was UK focused, the HTS books have seen contributions by authors from a wide range of countries, not just from Europe, but also North America, Australia and South East Asia. Moreover, some of those engaged in the IHT research programme have had the opportunity to develop their ideas more fully and more critically in the Series texts.

In the Introduction to the IHT book, Webster wrote that biomedical technologies can be characterised as having four key features. First, they can be *embedded* within the body, via prosthetics or pacemakers. Second, they can be *projective* of the body, as happens when patient data and information are digitised and then circulated and given new form via large-scale biobanks and clinical databases. Third, biomedical technologies can become *hybrid* as they pull together differing fields, such as in tissue and cell engineering. Finally, they can be *representational*, for example through increasingly sophisticated visual imaging and as biomarkers for disease become standardised and framed in specific ways.

In many ways these four features can still be seen today, and all are touched on or indeed form the principal focus in one or more of the books in the Series. But taken together the HTS Series offers new insights into how these are shaped by and made more complex through a much more fine-grained analysis of the contexts in which they are found. This throws light on the play of social hierarchies (associated with ethnicity, gender and age for example), on the organisational dynamics that shape the adoption of innovative therapies, on the discourses and claims associated with so-called personalised medicine and so on. More broadly, the books help us to see healthcare and its meaning, development and use as part of a wider ecosystem, a regime of governance and accountability, resource and its allocation and so how an apparently similar therapy can

have very different meanings and enactment in different national and global settings. This is particularly visible in the volume by Alan Petersen and his colleagues in their analysis of stem cell ‘tourism’.

Moreover, the Series title is ‘Health, Technology and Society’, and that comma between ‘health’ and ‘technology’ serves an important purpose. Health as such is contested and highly contextualised, and as many books in the Series demonstrate, although ‘health technologies’ form their core focus, these can be and often are outside of the formal institutional and clinical, practice-based structures of formal healthcare itself.

Another important feature of the books taken together is that we learn much about the ways in which health and health technologies are given ‘value’, and how this value is never self-evident or a given. For example, the books that we have brought together in the ‘Knowledge Production’ theme all touch on this issue in one way or another. This is not surprising since all forms of knowledge are based on implicit or explicit value judgements reflecting the assumptions and forms of authority on which they depend. These in turn often hide or fail to see the uncertainties and risks that accompany them.

## **The Normative and Methodological Contributions of the Series**

In many of the books, the authors offer suggestions and even recommendations about how the matters of concern they have explored might be better understood or handled more effectively. Jessica Mesman, for example, in the Knowledge Production section, explores neonatal clinical practices. She not only reveals hidden aspects of these practices but shows how they can be brought to the fore and so enable more effective and accountable clinical management of the premature baby. In the specific area of genetic testing, Gerard de Vries and Klasien Horstman, in the Responsibility section, make a strong case for much greater transparency about such tests and the traces they leave behind as they travel across patients, their families and into state programmes based on national screening and testing, such as the 100,000 Genome Programme in the UK that appeared after de Vries and Horstman’s book was published.