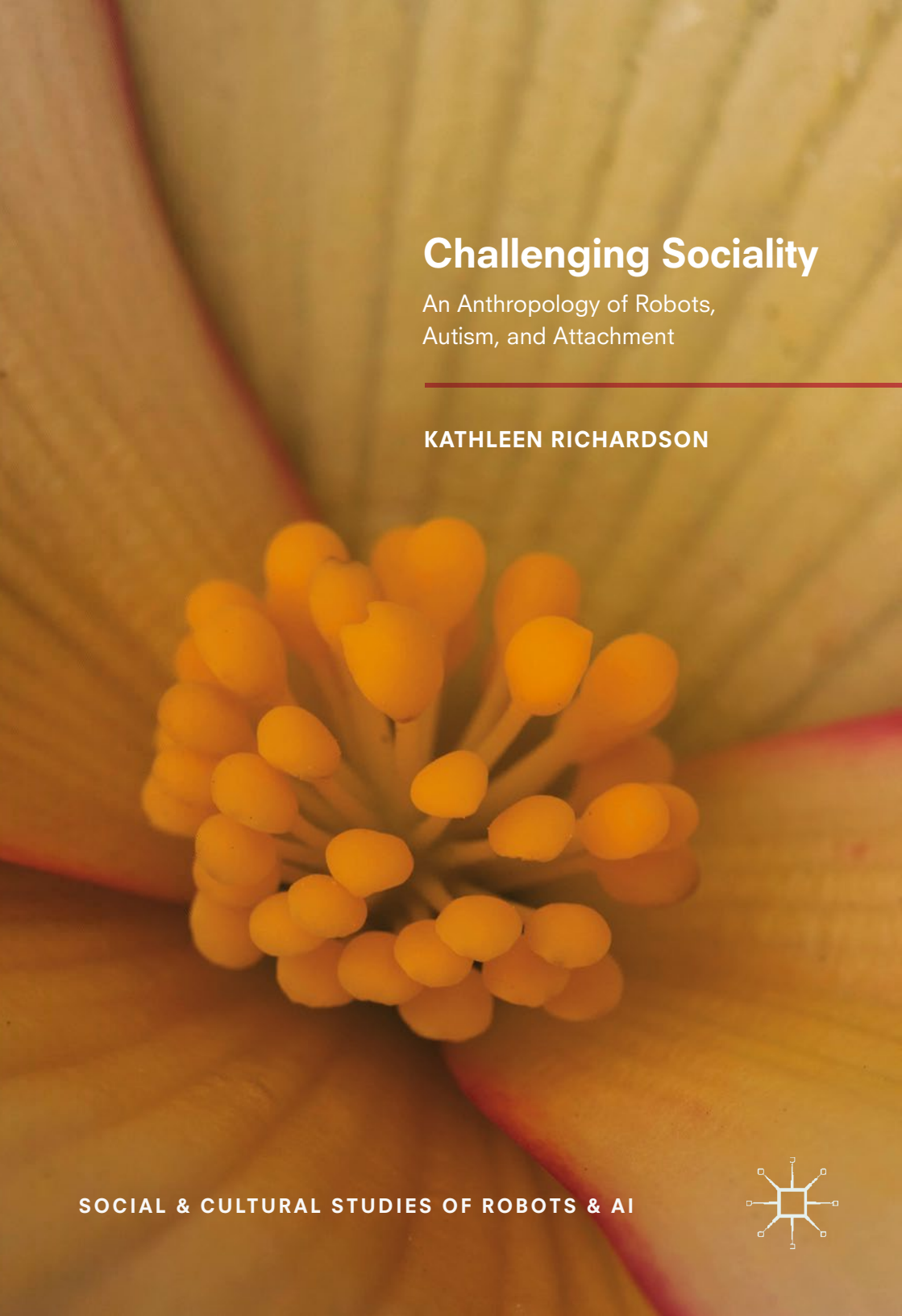

Challenging Sociality

An Anthropology of Robots, Autism, and Attachment

KATHLEEN RICHARDSON

SOCIAL & CULTURAL STUDIES OF ROBOTS & AI

Social and Cultural Studies of Robots and AI

Series Editors
Kathleen Richardson
Faculty of Technology
De Montfort University
Leicester, UK

Cathrine Hasse
Danish School of Education
Aarhus University
Copenhagen, Denmark

Teresa Heffernan
Department of English
St. Mary's University
Halifax, NS, Canada

This is a groundbreaking series that investigates the ways in which the "robot revolution" is shifting our understanding of what it means to be human. With robots filling a variety of roles in society—from soldiers to loving companions—we can see that the second machine age is already here. This raises questions about the future of labor, war, our environment, and even human-to human-relationships.

More information about this series at
http://www.palgrave.com/gp/series/15887

Kathleen Richardson

Challenging Sociality

An Anthropology of Robots, Autism, and Attachment

palgrave
macmillan

Kathleen Richardson
Faculty of Technology
De Montfort University
Leicester, UK

ISSN 2523-8523 ISSN 2523-8531 (electronic)
Social and Cultural Studies of Robots and AI
ISBN 978-3-319-74753-8 ISBN 978-3-319-74754-5 (eBook)
https://doi.org/10.1007/978-3-319-74754-5

Library of Congress Control Number: 2018935394

This Palgrave Macmillan imprint is published by the registered company Springer International Publishing AG part of Springer Nature.
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

For my witness and the little ones

Foreword

> The attitude of man is twofold, in accordance with the twofold nature of the primary words which he speaks.
>
> The primary words are not isolated words, but combined words.
>
> The one primary word is the combination I-Thou.
>
> The other primary word is the combination I-It; wherein, without a change in the primary word, one of the words He and She can replace It. (Martin Buber, I and Thou, 1937)

The ideas for this book were first conceived between 2003 and 2004 when I carried out my doctoral fieldwork in social anthropology at the labs at the Massachusetts Institute of Technology. It was here that I first came across analogies being made between robots and autism. I noticed that studies of disability, illness and difference were drawn on by these robotics researchers when they were making their humanoid robots. These researchers began to explore whether autism might give roboticists an insight into the 'mind' of a robot. One such paper called 'Implementing Models of Autism with a Humanoid Robot' took concepts from autism into robotics and back again. The growing popularity of the 'social' robot (a robot whose primary function is to be socially interactive), meant that roboticists began to ask questions about what is and what is not social. I was interested in how ideas of what constitutes sociality are personally and culturally informed. Are we really able to agree that a machine is 'social' if it has a face or can perform some interactive behaviour? My work into autism and robots first began here because it was in these labs that I was first confronted with the idea that a machine could be a social companion,

a friend, or a therapist. It was a few years later that I was exposed to the idea that robots could become girlfriends or wives. Robots performing intimate or relational roles has long been a staple of fiction—since long before a technological programme of action was initiated.

In my own studies I found robotics scientists would draw on the fields of disability and difference to use as a reference point to make robots, as if people with disabilities and differences are somehow not fully human and can be used as a model of comparison.

There are many popular theories that ignore species-specific sociality approaches to making sense of our world and propose we are cyborgs or multi-species. They make analogies between humans and machines or downgrade human interpersonal relationships and suggest important human relationships (a companion, lover, friend or therapist) can be replaced by robotic machines. Some propose that it is because human intimate relationships are so degraded today that people are becoming unable to differentiate between a human and a robot. Some are arguing the opposite, that robotic machines are becoming so sophisticated that it is becoming impossible to tell the difference between a robotic machine and a human.

Robots and AI are betwixt and between because they are believed to somehow cross a threshold between the world of humans and human-made artefacts. Robots and AI are thought to be something 'more than' ordinary artefacts: they can think, feel and move. This idea is more compelling if the robot looks humanlike.

Children and adults with autism are also believed, by some, to be betwixt and between, between the social and the asocial—a sphere that is written about by psychologists such as Simon Baron-Cohen. There has been a move to join these concepts and new partnerships have developed between the biomedical psychology of autism and the therapeutic benefits of robots and AI.

My central argument in this book is that all within and between human beings flows into the human-made. The human-made (i.e., robots), do not shape people; they reflect them. However, if what we produce in our artefacts reflects back to us an empty egocentric illusion informed by lack of empathy and anti-humanism, this is a problem. Who controls the making and production of the artefacts has more control over the environment we share and the relations that people can have between each other.

Real change comes from those interpersonal relations within and between people; if we can change those underlying relations, then the artefacts produced will change. The power is within and between I and you and in our human bonds and ties.

Leicester, UK
3 November 2017

Kathleen Richardson

Preface

> The Thou meets me through grace – it is not found by seeking.
>
> The Thou meets me. But I step into direct relation with it. Hence the relation means being chosen and choosing, suffering and action in one; just as any action of the whole being, which means the suspension of all partial actions and consequently of all sensations of actions grounded only in their particular limitation, is bound to resemble suffering.
>
> The primary word I-Thou can only be spoken with the whole being.
>
> All real living is meeting. (Martin Buber, I and Thou, 1937)

The term 'social' is a complex one, with multiple meanings. In social anthropology, the term 'social' refers to the 'social order'—the structure which shapes people's lives. In anthropology in the United States (U.S), 'the cultural' is often used instead of 'the social' to mean almost the same thing (though many an anthropologist would argue about the intricate differences). However, there is an important area of note, which is perhaps why we talk about 'social robots' rather than 'cultural robots' despite the fact that most of the robots I studied were built in the U.S. Often the term 'social' is implicitly synonymous with *socialising*, something people do as a shared experience involving enjoyment and entertainment. The term 'social' can also mean an interpersonal interaction. The social can refer to the macro—the structure of 'society' or shared experience —or the micro —interpersonal relationships. The social traditionally was about human beings and what they did with each other. But this has changed to now incorporate human-made artefacts such as robots.

In this book, I draw on the meaning of the social as an interpersonal phenomenon, a meeting between myself and different kinds of people. Some of this research is drawn from meetings with children with autism or autistic children (depending on your preferred terminology, something *you have*, or something *you are*).

In autism literature, the role of the interpersonal relationship is diminished, so much so that it is now commonplace to suggest that children with autism prefer things (including robots) to other people. There is a community of researchers that now claim that children with autism can respond well to robots with social features (outwardly appearing like humans) because people are too complex. For these robotics researchers, a humanlike robot is a 'simplified person'. How did we get to the idea that robots could be simplified persons? Or that children with autism prefer humanlike robotic machines over people? This is the subject of this book.

There is always reason for caution when writing about a subject matter that touches on matters of disability and difference. What authority does a person without autism have to write about autism? There can be no easy answers here. I became curious about autism because of the ways in which robotics scientists use autism to make sense of what it might be like to be a robot. It was exploration of this idea that led me to carry out this research. I welcome further discussion and dialogue with adults with autism, parents, activists, social scientists and roboticists on the issues I discuss in this book.

The widespread use of the empathising-systemising theory of essential sex differences in the development of robots for children with autism is also something I want to challenge in this book. I want to explore the way that autism has become a way to talk about typical masculinity, as if autism were an extreme form of masculinity that explains away male violence and lack of empathy. In my experience, people with autism do not lack empathy, and they are not deficient in empathy in the way of males who are socialised to hide their feelings, use violence as a way to control others, or act out violence on others. Consequently, I will be exploring analogies made between men, machines/robots and autism.

Autism researchers note two interconnected behaviours in children with autism: echolalia and pronoun reversal. 'Echolalia' comes from the Roman myth—Echo only repeats the last words spoken to her; she is tormented by an inability to respond in her own way. Pronoun reversal refers to the speaker (in the 'I' position) using the pronoun of the listener (in the 'You' position). So the child will say 'you sat down' to refer to the subject

of the action (her/him) taking the action (sitting down). However, the listener will still be holding the you position. A you meets a you, in effect. What does it mean when a you meets a you? And if the child is speaking about himself from the pronoun position of you, what has happened to his or her I?

This difficulty in expressing regular pronouns is often dismissed as a language error (the child knows which pronoun is correct but, on occasion, makes mistakes), or irrelevant behaviour (one of many language errors that are part of the repertoire of communicative speech). But what if the pronoun reversal actually tells us something about the experience of the child—that the child experiences themselves not as a separate person in the position of the I-speaker, but as part of the you-listener? Perhaps in this linguistic moment an insight into the ontological experience of the child is revealed.

If we took this into account in sense-making of autism, perhaps we would better understand the way in which children with autism need to regulate social interaction when confronted with a concern about their own selfhood and the boundaries between themselves and others. Our interpersonal encounters help us to make sense of ourselves, and if this is impaired, then it impacts on selfhood and ways of knowing others and being known by others. It should come as no surprise that children and adults with autism suffer from extreme anxiety and panic. In attachment studies one role of caregivers is to assist a developing child to regulate their emotions by soothing and comforting the child when he or she is in distress. The child internalises this soothing and comfort and can make use of it when the parent is not there. This is a way in which intimate interpersonal attachment is crucial for human development—especially so for children.

I would like to thank the British Academy for their funding support for this project and all those people who have helped contribute to the research by sharing their time and resources. I would like to thank the European Union for their funding support and helping me to learn more about how the research is developing and allowing me to at least contribute to the ethics of this area. For the last three years I have been working as an ethics advisor on DREAM (Development of Robot-Enhanced Therapy for Children with Autism Spectrum Disorders). DREAM is dedicated to developing robot technologies for helping psychotherapists in the field of Applied Behavioural Analysis (ABA) approaches to autism. I try as much as possible in my role as ethics advisor to introduce autism advocacy and critical autism perspectives into my ethical evaluations.

I would like to thank the school in London and all the staff and students I met and spoke with. You work so tremendously hard, and the staff struggle to get resources for the students. I would also like to thank the robotics scientists and psychologists. In keeping with issues of anthropological commitments to confidentiality, I have the people, the places and the robots pseudonyms. As the robotic scientists and psychologists I have worked with produce artefacts such as scholarly books, papers, dissertations and robots, I have only referred to public material if such activities do not conflict with my initial commitment to honour the relationships of my interlocuters, many of who I continue to meet as colleagues. All the interlocuters showed great genorosity by sharing their work with me. However, I do take responsibility for my critical reflections on some of these processes in the field of robots and autism.

I would like to thank the editors at Palgrave Macmillan for supporting this project.

I draw heavily on the research conducted by the Critical Autism Studies network and their brave work in questioning normative power-structures. The Critical Autism Studies network is inviting us to look beyond labels, or brains, or systems.

This book has been a journey from being mostly within mechanical notions of the human to rejecting these approaches in their entirety. There is no machine in the human being. Reproducing this fiction through making analogies between children or adults who are labelled autistic and robotic machines is a serious problem, not least because it deprives human beings of species-specific sociality and humanity.

I have some people to thank directly. Firstly, my very special thanks to Florence Gildea, who helped to prepare the manuscript and was a much-needed ally at the end of the process.

My understanding of I-you interrelatedness is drawn from my many dialogues with psychodramatist Caitlin Buon. She is extraordinarily intelligent and gifted and has an unyielding kindness that is as powerful as any great army!

Most of all, I would like to thank the young students of the school who put up with a stranger coming in and offering toys, a robot and a crane, to play with. I am sorry if I annoyed you in any way and my understanding of what you might be experiencing was not as well developed as it could have been. I still have a lot to learn and you have been my teachers. I am so grateful to all of you.

Leicester, UK Kathleen Richardson

Contents

CHAPTER 1

Introduction: Challenging Sociality

1.1 Autism and the Machine

Social interaction and communication are central features of human sociality, but could robotic machines be social? And what of those diagnosed with autism? What kinds of lifeworlds emerge for those who struggle to grasp the complexity of social interaction? What does sociality mean for those humans who find social interaction, so necessary for survival and happiness, confusing and difficult? This book explores the role of intermediaries designed to therapeutically help children with autism develop social skills. In the early twenty first century we are on the cusp of a new technologically mediated sociality, whereby robots (anthropomorphic machines) are produced to substitute humans in interpersonal relationships. As anthropomorphic robots take on these roles, particularly in fields such as healthcare, robots are increasingly being used as therapeutic tools for helping adults and children with mental health, physical or social conditions. These 'social' robots, humanlike in appearance and behaviour, are used as therapeutic tools for children with autism, and this reveals something about human-robotic imaginings.

Human relationships are characterised by a developmental awareness of human sociality—that is an ability to make sense of, and form, reciprocal social attachments with others. Children with autism, at least according to the psychological science literature, display difficulties in developing social awareness of others and experience difficulty in forming attachments, even to their primary caregivers (with whom human beings typically develop

K. Richardson, *Challenging Sociality*, Social and Cultural Studies of Robots and AI, https://doi.org/10.1007/978-3-319-74754-5_1

their core early relationships). Children with autism have difficulty reading the 'social' cues of others. Thus they may struggle to maintain eye-contact, read facial expressions and understand their own feelings. Children with autism are also said to prefer objects to other persons. When Leo Kanner first described autism in his 1943 paper, he noticed the interest in the physical world displayed by these children. The children's desire for 'aloneness' was connected to their interest in objects, he suggested.

> The outstanding, 'pathognomonic,' fundamental disorder is the children's inability to relate to themselves in the ordinary way to people and situations from the beginning of life. (Kanner 1943, p. 242)

Kanner continued along these lines, conflating the particular relationship the children expressed to objects with their 'aloneness':

> Objects that do not change their appearance and position, that retain their sameness and never threaten to interfere with the child's aloneness, are readily accepted by the autistic child. He has a good relation to objects. (p. 246)

Though research in autism studies has developed significantly since the 1940s, the two main features of Kanner's argument—'an inability to relate' and a 'good relation to objects'—underlie the arguments for using anthropomorphic robots to help children with autism develop social behaviours.

In what follows, I explore how machines that take on anthropomorphic forms in the guise of robots are used to help children with autism develop sociality. To understand how robots can take on these roles for children with autism, it is necessary to understand both the psychiatric context in which autism is understood as a specific kind of condition, and the field of social robotics. Though the field of social robotics is shaped differently from this psychiatric context, the two fields have formed a partnership around the topic of autism.

Autism and social robots encourage us to rethink the meaning of the social in contemporary anthropological theorising and in robotics. What model of the 'social' is employed in these narratives? What kind of 'relationship' is invoked through these meanings? The intermediaries that I study are primarily humanoid robots, but also toys, computer programmes and cartoon animations.

I will explore how intermediaries are developed to bridge this divide between the social and asocial fields. But I suggest that the mechanical models of the social that underscore Euro-American biomedical psychiatry