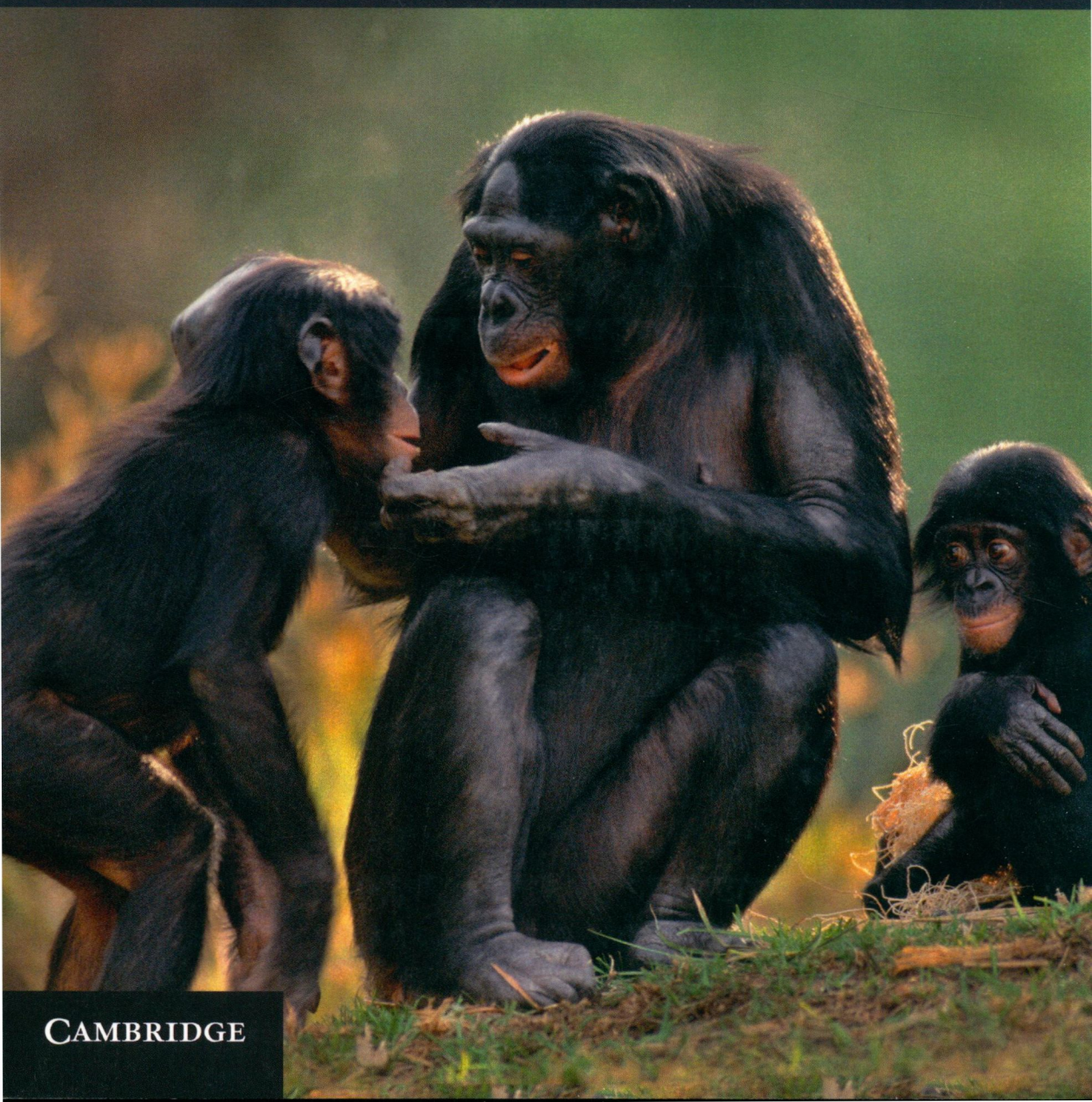


Lynn Hankinson Nelson

Biology and Feminism

A Philosophical Introduction



CAMBRIDGE

Cambridge Introductions to Philosophy and Biology

This book provides a unique introduction to the study of relationships between gender and biology, a core part of the feminist science research tradition which emerged nearly half a century ago. Lynn Hankinson Nelson presents an accessible and balanced discussion of research questions, background assumptions, methods, and hypotheses about biology and gender with which feminist scientists and science scholars critically and constructively engage. Writing from the perspective of contemporary philosophy of science, she examines the evidence for and ethical implications of biological hypotheses about gender, and discusses relevant philosophical issues including understandings of scientific objectivity, the nature of scientific reasoning, and relationships between biological research and the scientific and social contexts in which it is pursued. Clear and comprehensive, this volume addresses the engagements of feminist scientists and science scholars with a range of disciplines, including developmental and evolutionary biology, medicine, neurobiology, and primatology.

LYNN HANKINSON NELSON is Professor Emerita of Philosophy at the University of Washington. She has published *Who Knows* (1990) and numerous articles on feminist science scholarship. She is co-author of *On Quine* (1999), and is co-editor of *Feminism, Science, and the Philosophy of Science* (1997) and of a special issue of *Hypatia* on Feminist Science Studies (2004).

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University of Washington



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**For my granddaughters, Charley Grace and Elyse Cate
O'Connor**

Preface

In the preface to the first edition of *The Selfish Gene*, Richard Dawkins identified three kinds of reader he had in mind as he wrote it. I also had groups of readers in mind and they helped shape the level, foci, and content of the forthcoming discussion.

The first and most important group of readers are senior undergraduate and graduate students who are assigned this text for a course, or who find it on their own, and are largely unfamiliar with feminist engagements with the biological sciences and/or without an extensive background in biology or philosophy of science. Accordingly, I have worked to present relevant topics and arguments with as much clarity as possible, and to include cases of feminist engagements with biology that are not only representative but also accessible to these readers.

The second and third groups of readers are those I felt, to paraphrase Dawkins, “looking over my shoulder” as I wrote: those with substantial background and expertise in some or even all the topics discussed here. Let’s put feminist scientists and science scholars in the second group, and biologists and philosophers of biology in the third. But let’s remember that many of those whose work we will study are both biologists and feminists, or both philosophers of biology and feminists.

I separate the groups because the “voices” I had in mind reflect different backgrounds and/or interests. Although I don’t always follow the advice of those I think of as looking over my shoulder, at least not in the ways or to the extent they might have me do, keeping them in mind has led to this being a better discussion than it would have been had I not done so.

Acknowledgments

Writing a book can be a lonely process, but it is also one that, at least in my case, relies heavily on those whose work I have studied and learned from, and on the support of others. Colleagues in the Department of Philosophy at the University of Washington, particularly members of the Philosophy of Science and Feminist Philosophy reading groups, provided support and critical feedback, as did graduate and undergraduate students majoring in Biology and/or Philosophy, who read parts of the manuscript. My undergraduate research assistant, Sarah Weigelt, helped me to clarify issues so that students could understand them. Over many years, I have received support from feminist philosophers and scientists, and other philosophers and scientists, whose work has inspired me and whose constructive criticisms have been invaluable.

My husband, philosopher Jack Nelson, helped make this book come about in every way possible, reading and providing insightful comments about each chapter. My daughter Rebecca O'Connor's love, wise counsel, full support, and sense of humor have, as always, sustained me as I wrote the book.

A grant from the University of Washington's Royalty Research Fund supported my research and writing in 2014, for which I am very grateful.

Hilary Gaskin at Cambridge University Press consistently provided encouragement and support. Michael Ruse, general editor of the series of which this book is part, prodded and encouraged me when I felt discouraged (it is hard, I learned, to write a book that neither presupposes knowledge of the science discussed nor a familiarity with the philosophical issues raised by it, yet also does not oversimplify or misrepresent the science or philosophical

issues). He provided constructive feedback during every stage of the project, although it will be clear we don't agree about everything.

I dedicate this book to my four-year-old granddaughters, with love and in the hope that by the time they are able to read it, many of the issues it discusses will have been resolved.

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1 Conceptual Preliminaries

Introduction

This book is concerned with the question

What, if any, are the connections between the biological sciences (evolutionary biology, neurobiology, primatology, developmental biology, and so forth) and feminism?

And with the question

If there are any such connections, of what significance are they?

Before we can address these questions, we need an initial understanding of what feminism is, and of what kinds of connections between the biological sciences and feminism would be important to both. To be important, such connections would have to be substantive and empirically based. It is reasonably clear what areas of study fall within the biological sciences. Just what constitutes feminism is fairly complicated and so less obvious. It is a topic we will explore in some detail in subsequent chapters as we discuss specific connections alleged to obtain between feminism and biology. But there are some things we can say here about feminism that will be helpful in setting the stage for the discussions of this and later chapters.

Many readers may think of feminism as a purely political movement – a movement that seeks to identify and remove barriers to women being full participants in all aspects of life (social, political, economic, scientific, and so on). But feminism is more than a political movement. It is also a field of study – one subfield of which is devoted to gender and science that has, over the last 45 years, evolved into a loosely-delineated, multifaceted research program. Feminist scientists and science scholars claim to have shown that

many disciplines, including many sciences, have relied on, and in many cases, continue to rely on, unquestioned, unwarranted, and, at times also unrecognized, assumptions about gender. Feminists have argued that the research programs in which such assumptions function are in need of reexamination. Feminist researchers have also developed alternatives to assumptions, research questions, and hypotheses that they criticize. Feminists engaged in this research include field and laboratory scientists, philosophers of science, historians of science, and scholars in a variety of other disciplines.

The general focus of feminist research devoted to science, a research program that has come to be called “Feminist Science Scholarship” or “Feminist Science Studies,” is on the nature, sources, and roles of culturally and historically specific assumptions about gender in various sciences. We will be concentrating on feminists’ arguments about the role and consequences of such assumptions in the biological sciences. It is quite easy to show that such assumptions have led to hypotheses and theories that maintain that there are important differences between women and men – including in cognitive abilities and temperament – and even to hypotheses that men are superior to women in terms of some abilities and characteristics.

To be sure, many theories claiming that men are superior to women in one way or another are no longer viewed as credible; but feminists argue that they are not just of historical interest. For one thing, feminists argue, they provide insights into general relationships between the biological sciences, on the one hand, and the social and scientific contexts within which biological research was undertaken, on the other hand. Studying research that is now recognized as flawed because it is or was based in part on unwarranted assumptions about gender can also help us see how such assumptions can shape, limit, or contribute to research questions, methods, and, ultimately, purported findings of present day biological research.

A less obvious, and more subtle and widespread, phenomenon that feminists study, and to which they seek to draw attention, is the influence of androcentrism, or male centeredness, in biological research that is not seeking to establish or explain that men are in some way or other superior to women. Research characterized by androcentrism, feminists argue, takes the activities, behaviors, dispositions, and the like typically (or at least stereotypically) associated with men or males as their primary focus, and fails to study (or adequately study) those typically associated with women or females. We will consider feminist arguments for the presence and consequences of