Darwin's Plots

Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction

GILLIAN BEER

CAMBRIDGE

more information - www.cambridge.org/052178008X

This page intentionally left blank

Gillian Beer's landmark book demonstrates how Darwin overturned fundamental cultural assumptions by revising the stories he inherited, how George Eliot, Thomas Hardy and other writers pursued and resisted the contradictory implications of his narratives, and how the stories he produced about natural selection and the struggle for life now underpin our culture. This second edition of *Darwin's Plots* incorporates an extensive new preface by the author and a foreword by the distinguished American scholar George Levine.

'The only problem with this book is deciding what to praise first. It draws on a breadth of knowledge in many fields, its literary readings are alert and original, it has a profound grasp of idea and form. It must be read by the scientist, the student of Victorian thought and art and the educated person in the street . . . The book is so exciting as a work of literary criticism – among much else – that it must provoke and disturb old interpretations and judgements.' Barbara Hardy, *New Statesman.*

'. . . Gillian Beer's superb study . . . a work of criticism that takes its modest place among the other "cloudy triumphs" of English genius.' Michael Neve, *Sunday Times.*

'Offers fresh insights into familiar themes in the history of science by dealing with them in quite a new way.' John Durant, *The Times Literary Supplement.*

Gillian Beer is King Edward VII Professor of English Literature at the University of Cambridge and President of Clare Hall, Cambridge. Her previous books include *Arguing with the Past: Essays in Narrative from Woolf to Sidney* (1989), *Forging the Missing Link: Interdisciplinary Stories* (1992), *Open Fields: Science in Cultural Encounter* (1996) and *Virginia Woolf: the Common Ground: Essays by Gillian Beer* (1996).

DARWIN'S PLOTS

Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction

Second Edition

GILLIAN BEER

CAMBRIDGE
UNIVERSITY PRESS

PUBLISHED BY THE PRESS SYNDICATE OF THE UNIVERSITY OF CAMBRIDGE
The Pitt Building, Trumpington Street, Cambridge, United Kingdom

CAMBRIDGE UNIVERSITY PRESS
The Edinburgh Building, Cambridge CB2 2RU, UK
40 West 20th Street, New York, NY 10011-4211, USA
477 Williamstown Road, Port Melbourne, VIC 3207, Australia
Ruiz de Alarcón 13, 28014 Madrid, Spain
Dock House, The Waterfront, Cape Town 8001, South Africa

http://www.cambridge.org

© Gillian Beer, 1983, 2004

First published in printed format 2000

ISBN 0-511-03475-X eBook (Adobe Reader)
ISBN 0-521-78008-X hardback
ISBN 0-521-78392-5 paperback

Nature, if we believed all that is said of her, would be the most extraordinary being. She has horrors (horror vacui), she indulges in freaks (lusus naturae), she commits blunders (errores naturae, monstra). She is sometimes at war with herself, for, as Giraldus told us, 'Nature produced barnacles against Nature'; and of late years we have heard much of her power of selection.

Max Müller, *Lectures on the Science of Language*, second series, 1864, p. 566.

Contents

Foreword by George Levine *page* ix
Preface to the first edition xv
Preface to the second edition xvii

Introduction 1
I The remnant of the mythical 1
II 'The second blow' 8
III Problems of knowledge 14

Part I. Darwin's language 23

1. 'Pleasure like a tragedy': imagination and the material world 25

2. Fit and misfitting: anthropomorphism and the natural order 44

Part II. Darwin's plots 71

3. Analogy, metaphor and narrative in *The Origin* 73

4. Darwinian myths 97
I Growth and its myths 97
II Growth and transformation 99
III Transformation, retrogression, extinction: Darwinian romance 114

Part III. Responses: George Eliot and Thomas Hardy 137

5. George Eliot: *Middlemarch* 139
I The vital influence 139
II Structure and hypothesis 148
III The web of affinities 156

6. George Eliot: *Daniel Deronda* and the idea of a future life 169

7. Descent and sexual selection: women in narrative 196

8. Finding a scale for the human: plot and writing in Hardy's novels 220

Notes 242
Select bibliography of primary works 267
Index 273

Foreword

George Levine

Early in *Darwin's Plots*, Gillian Beer argues that *On the Origin of Species* is 'one of the most extraordinary examples of a work which included more than the maker of it at the time knew, despite all that he *did* know'. With these words Professor Beer initiated an enterprise that itself probably included more than she knew, despite all that she *did* know – which, to say the least, was a lot. For the book remains as alive and important now as it was when it appeared in 1983, on the first crest of the booming 'Darwin Industry', which has in the past fifteen years expanded even beyond the imagination of those who already understood how enormously rich and fertile Darwin's thought remained. Unlike most great scientists of the past, whose work has been absorbed by science (and often by culture) and marked as a brilliant stage toward later developments, Darwin remains strangely and almost charismatically alive – he 'has grown younger in recent years', says Professor Beer – and evolutionary biology remains an active force in science and beyond.

Darwin's Plots identifies a 'remnant of the mythical' in his arguments, a not quite complete fit 'between material and theory', a willingness to fall back on 'unknown laws', a passion for multiplicity and for aberrations. In teaching us how Darwin's metaphors and language work, by refusing any simple placement of his thought, either historical or philosophical, Professor Beer in effect predicted his continuing power to fertilise and disturb.

Darwin's name long ago entered the language to mark off a dog-eat-dog, cruelly competitive world. But, as Beer demonstrates, Darwin's language had shown him as much a believer in cooperation and what Kropotkin called 'mutual aid' as in ruthless competition. Beyond the popular imagination, up through the continuing human interest of the *Beagle* voyage and the continuing worry over the religious implications of evolutionary theory, the sustained interest of scholars and scientists

in his work has made him perhaps the most discussed writer in English besides Shakespeare. Like the language that Professor Beer so brilliantly analyses, Darwin has remained endlessly interpretable, and the work of understanding him and using his ideas has accelerated during the past two decades.

As Professor Beer herself notes, the most impressive achievement of the Darwin industry in that time has been the extraordinary edition of Darwin letters, which to the moment of this writing, through nine volumes, takes us only up to 1861, that is, two years after the publication of *On the Origin of Species*. The notebooks – richly suggestive in their indications of the way Darwin was thinking in the run-up to his great work – have been published. An enormously useful register and summary of all his correspondence is now available. Perhaps most interestingly of all, as a result of the crucial archival work that produced the *Letters*, several notable biographies have appeared, particularly *Voyaging*, by Janet Browne, and *Charles Darwin*, by Adrian Desmond and James Moore. These studies, while refusing anything like the traditional hagiographical approach and while thickening our understanding of Darwin as a creature of his moment and a complex and multiply motivated man, give us a Darwin who might begin to correspond in life to the complex artist/ scientist who produced the language that Professor Beer so richly analyses. But, as she rightly notes in addressing the Desmond–Moore biography, her own approach, fastening on the particularities of the complex and remarkably flexible language of Darwin's texts, undercuts the implication that Darwin was absolutely a man of his time, explicable in terms of the conventions of the middle-class society to which he so nervously and doggedly adhered.

At the same time as the biographical and archival interest in Darwin has intensified, there has been an explosion of interest in Darwinian theory, particularly through evolutionary psychology: Daniel Dennett has pronounced Darwin's idea 'dangerous' in a study that provocatively follows out the line that sees Darwin as unrelentingly and courageously materialist and antimetaphysical. Richard Dawkins has carried the myth of Darwin's commitment to a pervasively competitive world deep into microbiology with his theory of *The Selfish Gene*. E. O. Wilson and Steven Pinker, prominently among others, take Darwin as the patron saint of sociobiology and evolutionary psychology, which pursue reductionism into the intricacies of human consciousness and behaviour. Each of these writers claims Darwin as his own but in effect together they simply multiply the number of different Darwins his posterity

has created. The Darwin Gillian Beer gives us will not stand still for such unequivocal cooptations. Her new preface gives us some sense of how the approach of *Darwin's Plots* would have handled these later versions of Darwin, would have placed *them* inside the myths of our own culture and of the cultures they presume to transcend, and would have raised the kinds of questions that would make resting in their extreme versions of Darwin impossible. And beyond these struggles, within the limits of yet stricter science, Darwin remains controversial in the continuing combat between palaeontological and microbiological evolutionary biology. Outside of the official confines of science, the Victorian battle between God and Darwinian materialism continues in the attacks of creationism. *Darwin's Plots* prepared us for the tensions within and against Darwinian thought, as it worried the forms of our 'plots', the possibilities of meaning, order, futurity, development, death.

It is a mark of the significance of *Darwin's Plots* that it remains undeniably the single indispensable study of Darwin as a *writer* and as a presence in the language and consciousness of modern literature. Nobody has so rigorously and imaginatively addressed Darwin's work as literature, or so insistently read him as a creative writer, on an imaginative par with Charles Dickens or Thomas Hardy or George Eliot or Virginia Woolf.

Though it is deliberately 'literary' in its approach and sets out to read Darwin as a writer who also happened to be a scientist, it is also thoroughly multidisciplinary. The new preface gives another sharp glimpse of the way Professor Beer's remarkable attention to language extends beyond language into the widest range of intellectual and cultural connections. She demonstrates again that Darwin's language has its significance not merely in its literal meanings, but in the way tone, syntax, semantic substance play against each other and help shape thought and open up more possibilities than it can openly articulate. Such analysis has helped this book outreach the best of literary studies that have followed it, and to anticipate many of the moves made in current studies of Darwin and evolution. It is entirely compatible with the views promulgated by sociologists and historians of science with increasing force after its publication that ideas must be seen in the flesh-and-blood context of the moment of their production. Yet it refuses historical or social reductionism; Professor Beer historicises but she never loses sight of the ramifying possibilities of Darwin's special genius.

Thus she never adopts the extreme position, so prominent in much contemporary history and sociology of science and in cultural studies, that the social provides total explanation – that it is not a matter of

ideas half-perceived, half-created, but of ideas virtually entirely 'constructed'. She notes bemusedly in the new preface how some people read the book as arguing that science is merely a 'fiction'. But her point, richly made over and over again, is that the language in which Darwin's theory is articulated is thick with the culture in which Darwin lived and that fully to understand the 'science', one must recognise how the language contributed to it, evoked resistances, entailed compliance. The language and the arguments cannot be disentangled. So the book marks the strenuous, inevitably incomplete resistances of the theory to the cultural forces that shape it. Beer's study, emphasising the implication of Darwin's thought in culture, responsibly worries through the question of the degree to which Darwin can be thought of as 'discoverer' or as 'inventor'. Tracing much of Darwin's thought back to Romantic predecessors, in poetry as well as in science, Professor Beer shows through both argument and enactment that the recognition of the creative and imaginative aspects of science does not in any way diminish the importance or distinctness of scientific work. Though nobody can come away from a reading of the book without a sense that science is thoroughly and crucially (and creatively) inside of culture, every reader must also see that it brilliantly enriches our understanding of our own culture precisely because it enriches our understanding of Darwin and the enormous difficulty of his enterprise.

The distinctiveness of *Darwin's Plots* even now has not been adequately assimilated into literary study. What distinguished the book, and what continues to distinguish it in literary study, is not only its meticulous attention to Darwin's language, but a bold and convincing demonstration that Darwin should be read not only as someone whose ideas profoundly influenced his culture, but as someone whose ideas were also importantly shaped by culture. *Darwin's Plots*, that is to say, indicates that the cultural traffic ran both ways. Finding echoes in Darwin's writings of Milton (whose works, along with Lyell's *Principles of Geology* accompanied him everywhere on the *Beagle*), of Wordsworth and Coleridge and Dickens, Professor Beer identifies Darwin as a Romantic materialist and traces the movement of literary language thick with assumptions of intention and agency into arguments that deny those very assumptions.

Earlier interest in Darwin and literature usually manifested itself in the useful work of locating Darwinian ideas moving from him to writers, from science to literature and politics. Some pioneering studies like Lionel Stevenson's important *Darwin Among the Poets* (1932) focussed

almost entirely on Darwin's 'influence' on later writers. Darwin was a figure difficult to ignore even for the most literary of critics. But while there had been some earlier work that attended to the language of Darwin's books, particularly Stanley Edgar Hyman's *The Tangled Bank* (1962), nobody before Professor Beer had attended so meticulously and learnedly to the texture of Darwin's language and its deep historical roots. Nobody before Professor Beer traced so carefully the constraints of inherited language on the shaping of Darwin's arguments, or recognised the creative implications of his resistance to the traditions he used, or thought through so carefully and yet imaginatively the ways in which his metaphors opened up possibilities and created an argument that included more than the maker of it knew. Darwin's metaphors, Professor Beer argues, 'attempt to press upon the boundaries of the knowable within a human order'. *Darwin's Plots*, then, describes adventures in language and its possibilities, moves from the minute particulars of individual words to a recognition of how Darwin's work transformed the fundamental myths of the culture, myths upon which its language was built and whose vestiges help give Darwin's writing its capacity to escape monolithic impositions of meaning.

'Discourse', Professor Beer claims, 'can never be expunged from scientific *enquiry*'. Professor Beer's 'discourse' has its own distinctive and really inimitable qualities. *Darwin's Plots* marks the emergence of an unmistakable critical voice that speaks with authority and grace across a broad range of intellectual disciplines. Its strength comes in part from an unusual angularity, its capacity to evoke unexpected meanings and connections, to point toward multiplicity and contradiction. Beer's prose both entices and, one might say in a Beerism, disequilibrates: it makes it impossible for readers to relax, for it forces them to see that language does not hold still, neither Darwin's nor her own. Her words are never casual and serve not only the obvious utilitarian effect of getting it right but of getting it right in ways that expand possibilities and intimate abundance; they press to a broader realisation of how much might emerge from a creative imagination watching the play of words shifted from context to context. Such shifting is not only a function of the self-conscious human perceiver; it is the (Darwinian) way of the world. The seductive strenuousness of Beer's prose derives from her sense of the relentless fluidity of language and experience, the multiple possibilities of relationships, between ideas, people, cultures, disciplines.

This is the voice that makes *Darwin's Plots* one of the indispensable critical works of the past two decades and that accounts for its remarkable

capacity to open out into the intellectual struggles over Darwin, Darwinism, science and culture which followed in the years after first publication of the book. While in her new preface Professor Beer suggests ways in which she might have changed the book were she to be writing it now, what we have needs no alteration, in part because, like the Darwinian language Professor Beer explores, it suggests more than it can literally say. Professor Beer has set the standard for how to read Darwin and how to connect his amazing enterprise to the stories our culture has been able to tell itself, and continues to tell. She has shown that the language of Darwin's arguments is 'not a layer that can be skimmed off without loss'. *Darwin's Plots* takes us through that language into the cultural centres of Darwin's thinking and into a recognition of the ways in which it continues to proliferate and to enrich us.

Preface to the first edition

This work has filled and extended my life over several years. During that time I have been continuously grateful for the resources of the Cambridge University Library, the English Faculty Library, and the Girton College Library, and for the helpfulness of their librarians.

The English faculty office has come to my aid from time to time by typing draft sections and I would like to thank all the members of staff. Dr Jenny Fellows, and members of my family, have read proofs and checked references. Historians and philosophers of science as well as my colleagues in literary studies have been most kind in inviting me to try out my ideas in discussions, seminars, and lectures. I could not have completed the work without the stimulation of friends working in a variety of fields who have been generous of their knowledge, offering me references to pursue, arguments to consider, and scepticism to combat. It is hard to name a few among so many individuals to whom I feel gratitude, but I would particularly mention the importance of conversation over the years with John Beer, Jina Politi, Sally Shuttleworth, Allon White, and Ludmilla Jordanova. More recently, Howard Gruber, David Kohn, Mary Jacobus, and George Levine have offered invaluable help. Gordon Haight and Barbara Hardy have been of help to me since the beginning of my career and, like all those engaged with George Eliot, I am indebted to them for their work. Some very interesting writing on George Eliot and the relations between scientific and literary culture has not yet been published: I would particularly mention dissertations by John Durant, Simon During, Sally Shuttleworth and Margot Waddell.

Sections of the present book have appeared, in somewhat different form, in *This Particular Web* (ed. Ian Adam), *The Listener, Comparative Criticism* II (ed. Elinor Shaffer), *Women Writing and Writing about Women* (ed. Mary Jacobus), *Cahiers Victoriens et Edouardiens, The Journal for the History of the Behavioural Sciences*. In addition, I have written two forthcoming

essays which supplement the present work. 'Darwin's Reading and the Fictions of Development' in *The Darwinian Heritage* (ed. David Kohn, Princeton University Press) examines in much greater detail Darwin's literary reading at the period of theory formation and precipitation; 'Virginia Woolf and Prehistory' in *Virginia Woolf Centenary Essays* (ed. Eric Warner, Macmillan) shows the longer-term effects of Darwin's work in a twentieth-century writer.

Bearing and rearing children made me need to understand, first, evolutionary process, and then, the power of Darwin's writing in our culture. So it is to my mother and my sons that I dedicate this book – though without my husband, much would have been impossible.

Gillian Beer
Girton College, Cambridge

Preface to the second edition

Darwin has grown younger in recent years. He is no longer the authoritative old man with a beard substituting for God. Instead his work and life are again in contention and debate. Sociologists, microbiologists, linguists, sociobiologists, philosophers, feminists, psychologists, biographers, geneticists, novelists, poets, post-colonialists, have their say. Moreover, the publication, volume by tremendous volume since 1985, of the Darwin *Correspondence*[1] has shown us that, so far as Darwin's theories go, everything started with a young man, eager for knowledge and adventure, who set out on a journey round the world just before his twenty-third birthday: the age of a postgraduate student now. The letters bring out the vivid engagement of the young Darwin on his *Beagle* travels, the ardour of his response to the natural world and the immediacy of his engagement with societies he encountered. His vacillations in language register how hard he found it to settle his opinions of other tribes. His struggles with categories break open settled taxonomies. The stamina of his mental exploration gives the lie to the outworn assumption that once back from the *Beagle* he merely settled into a comfortable humdrum life. He was still on his world journeys while he sat in his armchair, his mind packed with the materiality of the physical world and sharpened by exceptions noted. His greenhousee could harbour questions that unsettled the assumptions of the western world – and he determined to engage with those questions.

When I came to write *Darwin's Plots* the best part of twenty years ago I first approached Charles Darwin's work through thinking about Victorian fantasy. Why was evolutionary theory abroad in so many guises? What anxieties did it arouse? What pleasures did it promise? And what new mental freedoms gave it its allure? As I began to investigate these

[1] Frederick Burkhardt; Sydney Smith; David Kohn; William Montgomery, eds. *The Correspondence of Charles Darwin, 1821–1882*, volume I (Cambridge, 1985); volume XI has now appeared and the edition is going forward strongly, with new editors added at present, through the 1860s.

questions I came to realise that the intellectual and emotional excitement generated by *The Origin of Species* was partly the outcome of Darwin's struggle to find a language to think in. He was working in a milieu where natural theology had set the terms for natural historians. The key concepts for natural theologians seeking to display God's workings in the material world were *design* and *creation*. Darwin, on the contrary, was trying to precipitate a theory based on *production* and *mutation*. How to think these ideas against the grain of the language available? One means was to invent a phrase poised on the edge of metaphor, a phrase that, moreover, alluded to its predecessor, even as it undermined it: 'natural selection' is a pithy rejoinder to 'natural theology'. Instead of an initiating godhead, Darwin suggests, diversification and selection have generated the history of the present world. Instead of teleology and forward plan, the future is an uncontrollable welter of possibilities. In the world he proposed there was no crucial explanatory function for God, nor indeed was there any special place assigned to the human in his argument. Those lacks, moreover, were not presented as lacks: the world of nature is always full.

I speak of 'natural selection' as poised on the edge of metaphor because of the way it claimed an explanatory role before contemporaries had learnt what it meant. They puzzled, as people have puzzled since, over its individual elements: natural as opposed to unnatural, or man-made? selected by whom or what? Part of Darwin's triumph is that the phrase, in the event, quite rapidly passed from this unruly question-raising, context-rich status into technical description. It came to seem honed, even simple.

Yet much of the power of 'natural selection' as a tool for thought comes from the opposing conceptual elements it encompasses. There is an awkward fit between the first two necessary elements and the third: the liberal emphasis on profusion, and variability, is constrained by the frugality of the selective process. There must be hyperproductivity; there must be difference; there must be death. Few organisms will survive through their progeny beyond a parsimonious number of generations. Yet, over aeons of time, all organisms are in some measure related to each other. Prodigality and rigour are the basis of his argument, as they are the characteristics of his prose.

Darwin affirmed at every stage of his argument and examples the linked concepts of diversification and selection. His metaphors of the tree and the great family in the *Origin* went some way to articulate his emphasis on unlikeness, transformation, and kinship – though they did