
Darwin on stage: evolutionary theory in the theatre

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The year 2009 promises to be for Darwin what the year 2005 was for Einstein: the Darwin Year celebrates the bicentennial of Darwin's birth as well as the hundred and fiftieth anniversary of the publication of *On the Origin of Species*. These events will generate worldwide discussions, reflections and commemorations over a wide range of fields that Darwin's work has affected and influenced, as well as new books and biographies and retrospectives; one major series of celebrations, for example, is planned in Cambridge in July 2009 (www.darwin2009.cam.ac.uk). In the world of the arts, Darwin is providing rich source material, not least for the theatre: already several Darwin plays have emerged that demonstrate the timeliness and fascination of both the man and his work. The following review looks at some of these plays in the context of the history of the representation of Darwin's ideas in the theatre, and asks: what is it that playwrights and audiences find so theatrically engaging about Charles Darwin and evolutionary theory?

A NEW DARWIN PLAY

Peter Parnell, author of the highly successful play *QED* which in its opening production starred Alan Alda as the physicist Richard Feynman, has written a new 'science play', staged recently by the Atlantic Theater Company in New York, called *Trumpery*.¹ The play dramatises the well-known story of Charles Darwin's near-upstaging by Alfred Russel Wallace. It opens with Darwin in his garden at Down House in 1858 (beautifully recreated in leafy greenery by the award-winning set designer Santo Loquasto). Darwin has just received from Wallace a letter and essay setting forth almost exactly the theory of evolution Darwin had been working on for the past twenty years but had been reluctant to publish, for fear of public reprisals at having done away with God as the Creator of the universe, and for fear of upsetting Emma, his very religious wife. Darwin confides in his friend Hooker, who urges him to publish immediately and who brings on the energetic and flamboyant Huxley to be Darwin's great defender and public voice. Together Hooker and Huxley arrange for Darwin (as first author) and Wallace to publish jointly a paper that will hardly be noticed, so that Wallace's findings will technically be made public but at the same time Darwin can go ahead and publish *On the Origin of Species* and thus 'trump' Wallace instead of the other way around.

This scientific plot is interwoven with a domestic one that shows Darwin coping with personal problems such as his chronic gastric suffering, the terminal illness of his daughter Annie, and the increasing strain caused by his wife Emma's devout faith which Darwin does not share. Throughout Act One Annie is clearly deteriorating, wheelchair bound and sickly. Father and daughter have a deep affectionate bond and Darwin is in agony over

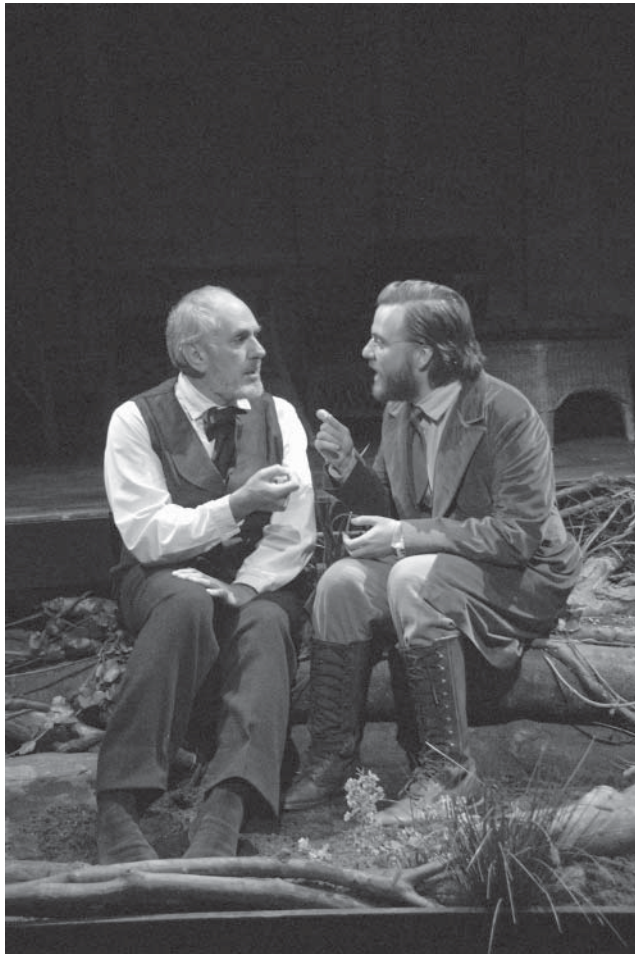


Michael Cristofer as Darwin, Michael Countryman as Hooker, Bianca Amato as Emma, Manoel Felciano as Wallace and Neal Huff as Huxley in the opening scene of Atlantic Theater Company's world premiere production of Peter Parnell's *Trumpey* (© Doug Hamilton)

Annie's illness, while Emma is physically and emotionally exhausted from caring for her. This act works extremely well to link the two sides of Darwin's life and show how he reacts to all the pressures building on him. When Act Two opens, Annie has died and the Darwins are in mourning. The tight focus of the play loosens as Parnell packs many disparate events into this one act, for example the arrival of a spiritualist who leads a seance in which Annie appears before Darwin, and the arrival of Wallace himself, who shows up at Down House one day in order to find out 'what happened'. This meeting between Darwin and Wallace is the climax of the play, as Wallace soothes Darwin's troubled soul.

Parnell 'puts firm flesh on Darwin and his colleagues, who might have come across as fossils'.² But, as so often when science meets theatre, biography meets with poetic licence. Almost all the events in the play reflect real incidents in Darwin's life, but they are, as the playwright explains in his 'Author's note' in the playbill, 'telescoped' for dramatic effect. The issue of biographical accuracy is one of the most sensitive in the reception of 'science plays', to the extent that it almost trumps scientific accuracy; the debates about Michael Frayn's depiction of Niels and Margrethe Bohr and Werner Heisenberg in the play *Copenhagen* have clearly shown this. Despite the fact that a play is a work of fiction and therefore utilises biographical material for fictional ends, there have been frequent outcries over this perceived manipulation of the facts, and it continues to be a site of hot contention whenever the history of science is at issue on stage.

It has to be said that Parnell is completely up front about his rearrangement of the facts, so that it seems unfair to harp on this aspect of the play. And he achieves what has eluded many writers of science plays: scientific conversations that are actually believable and convincing in their tone and subject matter. In *Trumpery*, the conversations about the minutiae of the fossil record and how the new dinosaur discoveries do or don't fit into it ring true; the actors convey a sense of excitement and enthusiasm for their emerging discoveries, and the message comes through that this is their first love, that science 'trumps' everything else in their lives. Manoel Felciano gives a nuanced performance as Wallace, the naive enthusiast who is also watchful and alert to how the older men of science shrewdly manipulate events in favour of his rival. Darwin, played by Michael Cristofer, exudes both a love of science and a constant nagging guilt over so many things – his spiritual doubt and how hard that is to reconcile with his wife's faith; his powerlessness to stop Annie dying; his personal trumping of Wallace; his work's trumping of religion.



Michael Cristofer as Darwin and Manoel Felciano as Wallace in Atlantic Theater Company's world premiere production of *Trumpery* (© Doug Hamilton)

Parnell shows how much of Darwin's joy in life derives from his interactions with other scientists, offsetting his domestic worries, his health problems, and even the terrible losses of his children. This too connects the figures of Darwin and Bohr, who lost his son Christian in a sailing accident. Male scientists and their 'private consolations . . . private agonies'³ may dominate plays like *Copenhagen* and *Trumpery*, but these works also hint at the roles of their long-suffering wives. We hear how both Margrethe Bohr and Emma Darwin kept the domestic engine running smoothly, leaving their husbands free to pursue their work with only minimal intrusion and with only the faintest awareness of the personal sacrifice this entails for the women. In *Trumpery*, Bianca Amato brings to the role of Emma Darwin a permanent sense of anguish and anger at her husband. At times this can make her seem one-sided and less than sympathetic, as she rigidly defends her stance and seems increasingly incompatible with her spouse. Yet clearly his work leaves her behind, and she resents it.

Another 'science play' that explores this kind of matrimonial tension is Shelagh Stephenson's *An Experiment with an Air-Pump* (1998), which alternates between two time periods (Enlightenment and now), much like Tom Stoppard's *Arcadia*, and shows the private and collective anxieties around scientific endeavour with particular interest in the toll it takes on women: on Susannah, the neglected wife of the scientist Fenwick in the 1799 scenes, and on Ellen, the modern scientist whose work in genetics is ethically complicated and alienates her husband Tom. In the character of Susannah, Stephenson shows the strain that keeping women uneducated and ignorant puts on marriage and on society, and how that is aggravated in a marriage to a scientist: 'I am lonely. It is a lonely thing to be married to you', Susannah tells her husband when they finally confront the problem of the growing gulf between them.⁴ Yet the discussion hardly alleviates the wife's suffering, and the use of the two time periods and the reversal of the gender roles forces us to confront the price exacted by the 'private agonies' of the scientist. *Trumpery*, *Copenhagen*, *An Experiment with an Air-Pump* and so many other contemporary plays that engage science put this domestic theme absolutely at the heart of the drama.

Likewise inherently dramatic is the notion of being 'trumped', surely a dreaded outcome for any scientist who has slogged away at his or her experiments, generated a landmark paper, only to find it 'scooped' by someone else who got there first. This is, of course, how Parnell is using the word. It's not clear though whether Parnell is aware that there are two other quite different senses to 'trumpetry' that bring a linguistic richness to the play. The verb to 'trump' means to get the better of, to override, and this is the sense implied by the title of the play, in which Wallace's work on evolution threatens to trump Darwin's before, by rushing his own much-delayed work into print, Darwin gets there first. But this is not the definition given for the noun 'trumpetry', which according to *Merriam-Webster* means 'worthless nonsense' or 'trivial or useless articles', as in *junk* ('a wagon loaded with household trumpetry' is how Washington Irving uses it, for example). Is the Biblical creation a load of trumpetry, then? Certainly this is implied by the events of the play, in which religion is superseded by science. (A further archaic usage given is 'tawdry finery'.) Finally, the noun 'trump', in addition to its card-playing usage of overriding another's card or hand, can mean 'a dependable and exemplary person', and to trump can mean to be 'especially generous or helpful' (*OED*). Is that what Parnell is saying in his depiction of Darwin? Or is it ironic, given that Darwin appears deeply conflicted and flawed? Is Wallace thus the

real ‘trump’ in that very positive sense of the word? Consciously or not, *Trumpery* revels in these many meanings of its title.

DARWIN’S APPEAL

The race to be first in science is a theme that of course resonates deeply with contemporary audiences. Darwin has become the poster-boy for evolutionary theory, but he was hardly the first to think of it. Rebecca Stott reminds us that on the first page of *On the Origin of Species* Darwin set out ‘An Historical Sketch of the Progress of Opinion on the Origin of Species, Previously to the Publication of the First Edition of This Work’. This list of Darwin’s intellectual forebears is extremely long and spans many centuries and nationalities including, to name just a few, Lamarck (French), Erasmus Darwin (English), Rafinesque (Greek-French-German), Haldeman (American), Chambers (Scottish), Owen (English), von Baer (Estonian), and of course Huxley and Hooker.⁵ Likewise, *Trumpery* is only the latest of several plays to deal with Darwin and with evolutionary theory. Of particular note is Craig Baxter’s *Re:Design*, an adaptation of the correspondence of Darwin and Asa Gray, a Harvard scientist and professor with whom Darwin corresponded throughout his later life. The play was commissioned by the Darwin Correspondence Project based at Cambridge University Library. It is a two-hander that covers almost exactly the same material as *Trumpery* but adheres to the facts and events much more closely.⁶ The dialogue comes verbatim from the letters of the two men, spanning decades and reflecting their own development vis-à-vis evolutionary theory – from Gray’s initially enthusiastic support of Darwin, to his increasingly vehement (though always polite) insistence on a ‘design’ behind the natural order. Baxter’s adaptation of the letters gives the dialogue authenticity, allowing the voices of Darwin and Gray to reach us directly rather than filtered through a paraphrasing modern consciousness as in *Trumpery*, yet it is never leaden: it achieves a lightness of touch and a breezy pace as the play moves quickly through years of correspondence, punctuated only by the flash of a camera as each man sits for his portrait. The play not only reveals some of the rich context behind Darwin’s ideas, but also his often surprising informality and humour – something that too frequently gets obscured in the scholarship on evolutionary theory and on Darwin himself.

Baxter and Parnell focus on the period in Darwin’s life during and after the publication of *On the Origin of Species*. This is the Darwin of popular myth – the mature and bearded Victorian sage, strong of mind but constitutionally weak from his years on the *Beagle*, the family man who mourned for his lost daughter Annie and who hardly left the comfort of Down House in his later years. But there is also the younger Darwin, the budding naturalist whom Captain FitzRoy took along on the *Beagle* and whose discoveries on those voyages formed the basis for his life’s work. Timberlake Wertenbaker takes this relationship between the young Darwin and FitzRoy as part of her subject for *After Darwin*, staged for the first time in London in 1998, the same year as Frayn’s *Copenhagen* and Stephenson’s *An Experiment with an Air-Pump*. Scenes from their first voyage on the *Beagle* form a play-within-a-play, with the actors playing Darwin and FitzRoy and the director and the playwright involved in the production furnishing the meta-theatrical frame. The scenes on the *Beagle* capture the importance of the experience for Darwin, as the momentous implications of the evidence he gathers in Tierra del Fuego in particular start to dawn on him. In his excitement he shares his findings with FitzRoy and the captain is startled and alarmed. FitzRoy makes a fascinating dramatic character, with his tragically misguided



Patrick Morris as Asa Gray and Terry Molloy as Charles Darwin in performance in *Re:Design* at the MIT Museum, Boston, February 2008

belief in helping the ‘natives’ (the story of Jemmy Button is told at one point in the play), his adherence to the Victorian theory of physiognomy, his violent temper as he and Darwin clash over religion versus science, and his eventual suicide.

After Darwin deserves greater recognition for its engagement with some of the aspects central to evolutionary theory, specifically natural selection, mutation and survival of the fittest, which it explores with real creativity. Wertebaker has constructed the play in such a way as to make it literally enact some of these ideas, performing evolutionary theory through the behaviour of the characters and the themes they discuss. Benedict Nightingale called it ‘probably the richest, most absorbing piece’ that Wertebaker had yet written (she is also the author of the acclaimed play *Our Country’s Good*, perhaps her best known work).⁷ Michael Billington wrote that this play about the ‘cultural legacy of Darwinism’ conveyed ‘the physical excitement, and intellectual disturbance, of discovery’, best illustrated in the scene when Darwin presents a terrified FitzRoy with the results of his research on finches in the Galapagos Islands. ‘From this moment on, the fixed certainties of God, man, England, and class are thrown into disarray.’⁸

CLASH OF TITANS

Another play that captures such an explosive moment is *Inherit the Wind* (1955), which is not strictly a Darwin play at all – it’s not concerned with Darwin himself or his biography,

but with the repercussions of his ideas, especially as they enter a more political arena. This partially documentary play by Jerome Lawrence and Robert E. Lee dramatises the notorious Scopes trial of 1925 in which a schoolteacher in Tennessee was prosecuted for teaching evolutionary theory rather than Creationism. Just as the playwright Arthur Miller did with his adaptation of Ibsen's *An Enemy of the People*, Lawrence and Lee used the harassment of the scientist-figure to make a strong statement about free speech during the peak of McCarthyism ('The spectators sat uneasily in the sweltering heat with murder in their hearts, barely able to restrain themselves. At stake was the freedom of every American', reads the blurb on the book jacket). It is pure courtroom drama, depicting the trial in which two of the country's greatest lawyers, William Jennings Bryan (prosecution) and Clarence Darrow (defence), went head to head over evolutionary theory. *Inherit the Wind* has renewed political relevance now with the emergence of Intelligent Design as a pseudo-scientific version of Creationism. Like Miller, Lawrence and Lee were harnessing the persecution of progressive thinking to political purpose. They wrote in their original prefatory note that the play is timeless: 'the stage directions set the time as "not too long ago". It might have been yesterday. It could be tomorrow.' But the play is not particularly interested in science trumping religion; it ends with the Darrow figure (pro-Darwin) alone on stage after the trial has ended, and as he packs up his briefcase he takes the Bible in one hand and *On the Origin of Species* in the other and weighs them, 'balancing them thoughtfully, as if his hands were scales', and then he 'slaps the two books together and jams them in his briefcase, side by side'.⁹ The world can accommodate the views contained in both these books, the playwrights seem to be saying, but it cannot tolerate suppression of ideas. Clearly what is at stake in this play is freedom of speech and resistance to oppression, exactly the same subject matter as in Bertolt Brecht's *Life of Galileo* a few years earlier.

THE NON-BIOGRAPHICAL TACK

In addition to the plays discussed here, there are other Darwin-based theatrical works that deserve mention. In France, the team of director Jean-François Peyret and neuroscientist Alain Prochiantz have mounted several plays engaging Darwin's ideas, such as *Des Chimères en automne* (2003) and *Les Variations Darwin* (2004). Peyret and Prochiantz take a radically different approach from the plays outlined above, in that their collaborations are director-driven rather than based on a playwright's unique script, and go through numerous workshop-generated drafts in their transformation from initial idea to final production. They also vehemently eschew biography. Peyret has spoken about divesting the theatre of its emphasis on biography and character, an emphasis that he feels makes theatre into 'night school' and makes us focus too much on a particular personality or on real-life events.¹⁰ He takes inspiration from Darwin's life and work but does not want his plays to be recreations of them.

CONCLUSION

It's a challenge to dramatisise evolutionary theory. Throughout the late nineteenth century Darwin's ideas were disseminated widely through popular theatre forms, as shown by Jane R. Goodall in her groundbreaking book *Performance and Evolution in the Age of Darwin*.¹¹ In

our own time, more and more plays are engaging with science and often with Darwin's life and/or ideas; as Billington says, 'theatre is moving into new territory: our post-Utopian, post-religious, postmodern world is looking to science to provide the moral conundrums that are the essence of drama'.¹² But is there simply too much material to pack into one play? Like Michael Frayn, whose play *Copenhagen* was largely inspired by Thomas Powers's book *Heisenberg's War*, Parnell found inspiration for his play when he stumbled across David Quammen's *Song of the Dodo* and its description of Wallace's work. Parnell started studying Darwin, Wallace and their times and 'pretty soon, he had a three-act play with, he realized, a cast of way too many characters dealing with way too many subjects – not just evolution, but topics like Colonialism and a Tierra del Fuego accused of murder'.¹³ This problem likewise dogs Wertenbaker, who has been criticised for packing too many subjects into *After Darwin*.¹⁴

Perhaps the main reason for the proliferation of biography-centred science plays (Galileo, Einstein, Darwin, Rutherford, Feynman, Oppenheimer) is the fascination with genius and the curiosity about how the life relates to the work. How do great people think, what is their secret, how do they do it, and how do they at the same time function on an everyday level, coping with domestic demands? This is the dramatic material, rather than any sense of suspense about events; it's all about personality and how we handle challenges, relationships, work-life balance, and especially conflict in all its forms. In addition to conflict, the drama also comes from a sense that there is a tremendous amount at stake: entire institutions can be brought down, laws challenged and changed, society altered through a single individual's achievements and insights. The sheer incongruity of scale that this implies is the stuff of Greek drama.

NOTES

1. Performance of *Trumpety*, directed by David Esbjornson, seen on 29 December 2007 in New York City.
2. C. Isherwood: 'Don't dillydally, Darwin, it's survival of the quickest' (review of *Trumpety*), *New York Times*, 6 December 2007.
3. M. Frayn: *Copenhagen*, p. 29; 2003, London, Methuen.
4. S. Stephenson: *An Experiment with an Air-Pump*, p. 79; 1998, London, Methuen.
5. R. Stott: *Speculators: Poets and Philosophers of Evolution*; forthcoming, Chicago, IL, University of Chicago Press.
6. A version of *Re:Design* as it was performed in its premiere in Boston, Massachusetts is available online at www.darwinproject.ac.uk/content/view/89/74; a webcast version of one of the US performances (including introductions and a Q&A session) is on the MIT museum website at web.mit.edu/webcast/museum/2008/museum-darwin-drama-mit-n52126-14feb2008-1800-220k.ram. There is also a version of the play for three actors.
7. B. Nightingale: 'Top prize for originality' (review of *After Darwin*), *The Times*, 15 July 1998.
8. M. Billington: 'The finch mob' (review of *After Darwin*), *Guardian Weekly*, 26 July 1998, 'Arts', p. 27.
9. J. Lawrence and R. E. Lee: *Inherit the Wind*, p. 115; 2003, New York, NY, Ballantine Books.
10. K. Shepherd-Barr: *Science on Stage: From Doctor Faustus to Copenhagen*, p. 202; 2006, Princeton, NJ, Princeton University Press.
11. J. R. Goodall: *Performance and Evolution in the Age of Darwin: Out of the Natural Order*, 2002, London, Routledge.
12. M. Billington: 'The finch mob' (see Note 8). In addition to all these plays, there are also several films about Darwin in production, one based on *Evolution's Captain* and another on *Annie's Box*; see <http://thedispersalofdarwin.blogspot.com/2007/10/darwin-at-movies-in-2009.html>.

13. C. Dean: 'Darwin's era, modern themes: science, faith and publication', *New York Times*, 18 December 2007 ('Science' section).
14. See K. Shepherd-Barr: *Science on Stage*, ch. 4 (see Note 10).

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