

After Darwin's Plots

Gillian Beer

Beer's short essay reflects on three essays which were originally delivered as papers during the 2009 autumn session of the London Nineteenth-Century Studies seminar.

These three striking essays converge on questions of narrative and diverge in the stories they tell about it. Life story, serial story, 'anti-narrative': these are the materials deployed but the methods of approach are very diverse. Underlying all three, though not always remarked, are the conditions of Victorian education and their consequences for literate boys and men.

The education system of the time, which favoured ancient classical and some modern literature way above scientific practice, also reinforced and shaped the way people set about thinking (and thinking about thinking). If one looks, for example, at James Clerk Maxwell's scientific papers they are frequently larded with quotations, citations, and apt comparisons from classical and more recent authors, in particular Milton and Tennyson. Such citation was a form of cultural authentication. It reassured the assumed peer readers that the writer shared their gentlemanly world even as he ventured out into strange seas of thought, alone. But it also gave great prominence to the role of metaphor in discovery because of the long arc between the realms described, and Maxwell believed that metaphor was a prime method of opening up questions in a new intellectual environment: the transfer from one set of expectations to another, he argued, revealed hidden problems and possibilities.

Even more directly, John Tyndall was credited with an extraordinarily developed mental awareness of relations in space, which helped to advance his work on radiation. That talent, Tyndall declared, was trained by reading Milton's epic poem *Paradise Lost*.

English grammar was the most important discipline of my boyhood. The piercing through the involved and inverted sentences of 'Paradise Lost'; the linking of the verb to its often distant nominative, of the relative to its distant antecedent, of the agent to the object of the transitive verb, of the preposition to the noun or pronoun which it governed, the study of variations in mood and tense, the transpositions often necessary to bring out the true grammatical structure of a sentence,—all this was to my young mind a discipline of the highest value, and a source of unflagging delight.¹

‘Discipline’ and ‘unflagging delight’: the two terms often lie close together in these papers and essays by mid-nineteenth-century scientists. W.K. Clifford, the founder of geometric algebra, in ‘On the Aims and Instruments of Scientific Thought’ in the 1870s enlarges the scope of the concept ‘science’ to embrace much that elsewhere later, in the twentieth century, was often presented as its opposite: poetry.

When a poet finds that he has to move a strange new world which his predecessors have not moved; when, nevertheless, he catches fire from their flashes, arms from their armoury, sustentation from their footprints, the procedure by which he applies old experience to new circumstances is nothing greater or less than scientific thought.²

Clifford is here using paradox to make his point. The weight of authority had earlier been that of literature: here science extends its reach across all forms of creativity. Clifford pays the poet a compliment but he also makes him a creature of the scientific story.

So the interesting question that remains to be addressed is not just why ‘men of science’ alluded to literature or even why they grounded the organisation of their rhetoric in terms derived from literary models. Beyond those features is the question of how a particular scientist, or a particular branch of science, resisted, disposed, or worked out from specific literary models. Adelene Buckland in ‘Losing the Plot: the Geological Anti-Narrative’ suggests that Scott’s novels, with their discursive range and their refusal to be driven primarily by plot action, provided a counter-version of narrative that allowed geologists to distinguish themselves from the showy novelistic stories of the earth’s long history: ‘What Scott had achieved for the novel, the geologists hoped to achieve for their suspect science.’ Yet geology had also been haunted (or liberated) by James Hutton’s famous assertion that he saw ‘no vestiges of a beginning, nor prospect of an end’ – Hutton proposed a narrative that flouted, even as it paid tribute to, the assumptions of orderly fiction. Hutton’s cyclic plot is closer to the formal properties of soap-opera, spinning without closure, than to those of the novel. And Scott’s novels, in contrast, encompass compelling, page-turning stories, as in *The Heart of Midlothian*. Buckland writes informatively about Charles Lyell, Adam Sedgwick and about William Buckland. She makes an interesting case for the anxieties among geologists and their problems in repudiating plot, though the

Gillian Beer, After Darwin’s Plots

terms ‘plot’, ‘narrative’, and ‘story’ sometimes converge and sometimes split apart according to the needs of her argument. Her conclusion that for nineteenth-century geologists ‘narrative was as often a problem as a possibility’ is certainly worth pondering.

Gowan Dawson in “‘By a Comparison of Incidents and Dialogue’”: Richard Owen, *Comparative Anatomy and Victorian Serial Fiction*’ takes the case of Richard Owen, Darwin’s later antagonist and the most formidable comparative anatomist of his period. Dawson demonstrates that Owen enjoyed a range of reading quite as broad as Darwin’s (a case that could be made also, as I’ve indicated here and long ago elsewhere, for scientists such as Maxwell and Tyndall too). But he then takes the case further and argues specifically that Owen’s eager enjoyment of serial fiction, particularly that of Dickens and Thackeray, with its delays, its prescience, its jigsaw surprises, positively fuelled Owen’s creativity and sustained his work as a comparative anatomist. So not only did such reading offer him relaxation from hard intellectual work but it also afforded him procedures that enhanced his imaginative powers as a scientific worker: this brilliant insight Dawson thoroughly documents in the course of the essay. Owen’s particular skill was in presaging from small fragments of bone the total anatomy of extinct creatures:

In 1839 Owen inferred the existence of a hitherto unknown giant prehistoric bird in New Zealand from the evidence of just a small fragment of femur bone, a prediction that was spectacularly confirmed four years later with the arrival of a consignment of bones from which Owen was able to reconstruct the entire skeleton of the wingless Moa.

The date of this particular episode, 1839, makes it clear that Dawson’s argument is not, and cannot be, that the serial novels *started* the process of Owen’s detective investigations, but the analogy is strong with the reading pleasures of serialization: ‘small, disconnected parts from which they [the readers] had to make inferences about the nature of a work that would often not be completed for several months or even years to come’. Serials, however, often included discursive episodes and even turned in their tracks so that the relation of part to whole was not as readily controlled as in Owen’s percipient projection of fragment to completed anatomy. But the eagerness of anticipation, the thrill of prolepsis, passed between the two

Gillian Beer, *After Darwin’s Plots*

enquiries: ‘From the mid-1830s until at least the early 1860s [...] Owen was perpetually waiting, with apparently equal anticipation and excitement, for fossilized remains coming bit by bit and novels arriving part by part.’ Dawson ends his essay by meditating on the power of poetry in Owen’s thinking, urging the possibility that it was more intimately effective in his mind than in that of Darwin. Perhaps, rather, the poets they enjoyed were not always the same: Darwin relished long narrative poems above all, as we see in his reading not only *Paradise Lost* but – twice – the 360 page *Excursion*, with its mixture of metaphysical argument and close sympathy with lost humdrum lives. Not all reading is directed to one end. But as Dawson shows, the more we know about the reading of creative people the stronger our insight into the workings of their imaginations.

David Amigoni in ‘Narrating Darwinian Inheritances: Fields, Life Stories and the Literature-Science Relation’ is concerned with ‘inheritance’, those continuities and discrepancies that emerge when we narrate life stories in shifting disciplinary contexts. He here explores ‘the entangled senses of familial, biological and intellectual inheritance’ manifested by the extended Darwin family, and given a peculiar twist by the emergence in Galton’s writing of eugenic speculation and experiment – a self-referential turn that in longer retrospect does not always flatter the extended family it takes as its case-history. Amigoni is particularly concerned with the concept of ‘field’ and with the processes by which ideas, stories, assumptions, and indeed persons, wander across supposed disciplinary boundaries. He finds the way forward through the terms of life-writing with its emphasis on sympathy and its constant re-contextualising of the individual through social, intellectual and familial groups. He demonstrates the difficult birth of the Sociology Society and the uncertain relations between biographical data and generalisable insights. For example, he comments that

What is striking about Galton’s use of biographical material is the way that it is appropriated as ‘data’ for actuarial, eugenic purposes – for example, Charles Darwin’s comment on his father [...] that he was ‘the wisest man I ever knew’ – is presented as evidence of a heritable trait, rather than being cast in the literary dialect of sympathy building.

Gillian Beer, After Darwin’s Plots

Amigoni carefully distinguishes the diverse strands in our own reading of these life-stories: those of identification ‘ironic as well as sympathetic’. He poises his argument to make room for tonic uncertainties when we look back on lives, lives that are never in themselves complete but that constantly outgo our telling of them or of their familial and political potential. Amigoni’s reading of Noel Annan, indeed, a historian somewhat out of fashion now, exemplifies what can be gained by setting writing in fresh contexts and opening the gate to the field.

¹ John Tyndall, ‘An Address to Students’, delivered at University College, London, Session 1868–69 (repr. in John Tyndall, *Fragments of Science: A Series of Detached Essays, Addresses, and Reviews*, 6th edn, 2 vols (London: Longmans, Green, 1879), II, 91–100 (p. 93).

² William Kingdon Clifford, *Lectures and Essays*, ed. by Leslie Stephen and Sir Frederick Pollock, 2 vols (London: Macmillan, 1901), I, 179–80.