

## **The Giraffe's Neck**

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A review of *Leonardo's Mountain of Clams and the Diet of Worms* by Steven Jay Gould  
Jonathan Cape, London.1998. ISBN 0-224-05043-5 pp.422

02.07.99 *The Times Literary Supplement*

The lyrics of W.S. Gilbert, New York City when a ride on the Staten Island Ferry cost a nickle, the notebooks of Leonardo Da Vinci, the Dodo, and, above -- or rather, below -- all, fossils, fossils, fossils; yes, Steven Jay Gould has published another collection of essays. As ever his prose is superb, wondrous, brilliant, marvellous, magnificent and altogether inimitable. Not that others don't try. Twenty years of Gouldiana bound in seven previous collections have changed the way scientists address the public. And not just the public. The last time I heard Gould speak was at a professional conference where, as usual, he managed to work in a baseball anecdote (those *damn* Yankees) between descanting on punctuated equilibria, spandrels and the like. Because he *is*, after all, Steven Jay Gould, the story was fairly amusing, apt and worthy of the telling even to those who cannot abide the game. But its consequent was less pleasing: a succession of America's brightest young biologists who, each and every one of them, favoured the audience with their baseball-team allegiances before turning to the substance of their talks. The contagion was halted only when an Englishman rose to speak, but I know not what he said, for I was, by then, in tears.

So, too, it is with his essays. The boundless enthusiasms, lashings of superlatives, vignettes of childhood, fatuous digressions, plunderings of *Bartlett's* (not to mention a tendency to shove all this stuff between parentheses) are, by now, faithful friends to all those who address the public in the name of science. "Where," the literary agents and commissioning editors demand "is the personal voice?" Quantum Mechanics or Immunogenetics -- if you want to tell the people, you gotta be a *mensch*. But if Gould has acquired feebler imitators, that is hardly his fault. It is the necessary fate of a man who, as John Maynard Smith once rightly remarked, is best known for the excellence of his popular essays.

And excellent they are. Gould is at his best when he practises what he so tirelessly preaches: that to understand the history of science, it is necessary to read the original documents. This precept will hardly astonish historians, but scientists are, by and large, a lazy lot when it comes to historical accounts. They do not like library basements (anything that matters is sure to be on-line), and tend to have but a feeble grasp of dead languages such as Latin, German and French. So it is that, among scientists, knowledge of their predecessors' thoughts is largely propagated by oral tradition and undergraduate textbook, and resembles more a collection of scientific fables, each with its own pungent moral, than anything to be read in the founding documents of their field. To be sure, there is more virtue in a good experiment than in the whole of the *Philosophie Zoologique*, (1809); yet how amusing to see one of these fables taken apart. We all know, for example, that Jean Baptiste Lamarck used the giraffe's neck as a prime example of adaptation via

the inheritance of acquired characteristics (the giraffe stretches its neck to grasp at leaves; its offspring have, therefore, slightly longer necks; they stretch...*etc.*) and that (the fable concludes) Darwin showed he was wrong to do so, adaptation by natural selection being the correct explanation. Not so, says Gould: Lamarck had precious little to say about giraffes' necks; Darwin was equivocal on the matter and, anyway, the giraffe's neck may have evolved by sexual selection for the purpose of hitting other giraffes – improbable though that may seem.

Biologists will mourn the loss of one of their favourite exemplary tales. But should they do so, they will be more than compensated in learning that the Great Irish Elk, a creature hitherto known only from skeletons, had stripes and a hump, for so it was depicted by the paleolithic cave-artists of Chauvet and Cougnac. Art historians will also surely delight in Gould's account of the iconography of marine life. Before 1850 or so, "naturalistic" depictions of submarine beasts -- fish, snails and cephalopods and so on -- invariably had them striking attitudes on the beach, rudely removed from their natural element; came the invention of the aquarium, and illustrators shifted their perspective to beneath the waves. And engineers will be entranced by an essay on the Great Western Railroad, though they may be disturbed to find Gould asking apropos of Isambard Kingdom Brunel "How many of you know his name?" Presumably he expects no readers among the commuting hordes who trudge daily past effigies of the Great Engineer in places like Paddington, Reading and Slough. That particular piece turns, as it happens, on our supposed and unreasonable willingness to recognise individual creative drive in artists and not in scientists or engineers -- but, like so many of Gould's assertions of what we think, it's a thesis that simply fails to leave the starting Gates.

Therein lies a problem. Gould's essays are, he tells us, exercises in drawing the general from the particular: great themes from details. The details are invariably interesting; it is the great themes that bore. For Gould cannot resist moralising. The spirit soars to read of parasitic barnacles that grow like tumours in their hosts, and sinks as the tale mounts to its inevitable conclusion...that evolution is neither linear nor progressive. This volume contains at least six essays on this theme; previous volumes must contain dozens more. And: history is contingent; man is not the apogee of evolution; man is one species; scientists are moulded by their times; evolutionary psychology is bad – the scenes are varied and wondrous, the actors compel attention, but there are only four or five plots. Some of these *idées fixes* have the ring of eternal truth; some are a matter for dispute, yet others are notions peculiar, among evolutionary biologists, to Gould. Among the last is the repeated assertion that Life or, sometimes merely, life, is merely one meaningless thing after another; history is contingent, causality is void, a Caucus-race in which all have won and all must have prizes. Applied to human affairs this is quaintly Utopian; applied to biological evolution it represents the oddest commitment to null hypotheses (random distributions of events of one sort or another) without any serious attempt to prove them wrong. It is a strange mind set. Stranger yet is Gould's fondness for the works of W. S. Gilbert. Were all known copies of the *Mikado's* libretto somehow consumed in a fiery holocaust tomorrow, it could surely be retrieved entire from irrelevant asides in these eight volumes of Gould. "Brevity is the soul of wit" he somewhere tells us, but he does not believe it, and the essays come one after another: prolix, hectoring and for all that – it must be said – enchanting. They will continue to

come, till...when? Till the millenium, he tell us, when the series will conclude with the tenth and final volume. The Collected Gould, when it comes, will be a thing of wonder, a testament to the power of evolutionary metaphor the like of which has not been seen since the works of Herbert Spencer. When Gould receives that final volume from the printers, we can be sure that the *Bartlett's* will be taken from the shelf just one last time and from Harvard Yard will come the triumphant cry: "Look on my works, ye Mighty, and despair!"