

At a Meeting of the Faculty of Arts and Sciences on February 5, 2019, the following tribute to the life and service of the late Stephen Jay Gould was placed upon the permanent records of the Faculty.

STEPHEN JAY GOULD

Born: September 10, 1941

Died: May 20, 2002

Steve Gould's boyhood can be pieced together from autobiographical vignettes spread through his celebrated essays on evolution and the fossil record. Steve was born the son of a proudly Marxist court stenographer in Queens and became smitten at an early age by the American Museum of Natural History and its remarkable dinosaurs. In combination, these experiences fueled his ambition to study fossils, but in new ways. Following an undergraduate education at Antioch College, where he completed a double major in geology and philosophy, Steve returned to the American Museum, earning his Columbia doctorate in 1967 before joining the Harvard faculty as Assistant Professor of Geological Sciences. His first paper, a critique of uniformitarianism ("the present is the key to the past") written as a graduate student, displayed Steve's penchant for disciplined attacks on scientific dogma *in statu nascendi*. Indeed, much of Steve's early research revisited classic paleontological literature, viewed through a new lens informed by developmental biology. Whether writing on the outsized antlers of Irish elk, Mesozoic mollusks known as devil's toenails, or primate brains, Steve showed how allometry—scaling relationships in growth—both constrain and inform evolutionary interpretation. This effort culminated in Steve's first and, in the minds of many, best book, *Ontogeny and Phylogeny*, published in 1977. Although written just before the rising tide of developmental genetics changed forever how biologists approach morphogenesis, *Ontogeny and Phylogeny* remains essential reading for its historical scholarship and clear-eyed discussion of development as a source of evolutionary novelty.

Perhaps Steve's most famous take-down of paleontological dogma began with a 1972 paper written with graduate school buddy Niles Eldredge. For generations, paleontologists—and biologists in general—had viewed evolution as continuous, and morphological change as gradual. The fact that paleontologists had rarely if ever documented unambiguous patterns of what Eldredge and Gould termed "phyletic gradualism" was viewed as the consequence of a woefully incomplete fossil record. In contrast, Eldredge and Gould argued that the fossil record is pretty good and that the pattern of "punctuated equilibrium"—long-term morphological stasis punctuated by rapid change at times of speciation—genuinely reflects the evolutionary process. That morphological change should be concentrated at times of speciation was, Eldredge and Gould asserted, a simple consequence of speciation models such as those championed by Ernst Mayr and others. In retrospect, Eldredge and Gould's initial paper seems uncontroversial, but subsequent essays, especially by Steve, were anything but. Steve's view that punctuated equilibrium requires processes undocumented by population biologists never gained traction, but the broader view that, as Steve put it, "stasis is data"

helped to fuel the rise of quantitative paleobiology.

The close of the decade saw the publication of both Steve's most cited technical paper and one of his most appreciated and debated books. In "The spandrels of San Marco and the Panglossian paradigm," Gould and Harvard colleague Richard Lewontin offered a memorably eloquent and sharp critique of adaptation as the *de facto* explanation for evolutionary pattern. *The Mismeasure of Man* provided an equally trenchant commentary on the misuse of intelligence testing, motivated in part by a passage from Darwin's *Voyage of the Beagle*: "if the misery of our poor be caused not by the laws of nature but by our institutions, great is our sin."

Around this time, Steve's life was to change in two distinct ways. First, the publication of *Ever Since Darwin*, a collection of essays originally published in *Natural History*, catapulted Steve to fame well beyond the halls of science, paving the way for his emergence as one of America's leading public intellectuals. In 1982, however, Steve was diagnosed with mesothelioma, at the time a statistical death sentence. Following several challenging years, the cancer went into remission, testimony, one can only surmise, to Steve's force of will as well as the skills of his doctors. As health returned, Steve focused on his expanding career as essayist and public speaker, his books widely read and his lectures enthralling audiences, often for the full ninety minutes of his hour-long programs. His 1989 book, *Wonderful Life: The Burgess Shale and the Nature of History*, challenged readers to absorb details of fossil morphologies, but it spent several weeks on the *New York Times* best-seller list.

Steve spent his final decade writing and lecturing around the world, his accomplishments recognized by membership in the National Academy of Sciences, a MacArthur fellowship, dozens of medals, at least 44 honorary degrees, and an appearance as himself on *The Simpsons*. A *New York Times* op-ed piece written by Steve in the wake of 9/11 memorably captures his unique ability to blend science and humanism:

We may reaffirm an essential truth too easily forgotten, and regain some crucial comfort too readily foregone. Good and kind people outnumber all others by thousands to one. The tragedy of human history lies in the enormous potential for destruction in rare acts of evil, not in the high frequency of evil people. Complex systems can only be built step by step, whereas destruction requires but an instant. Thus, in what I like to call the Great Asymmetry, every spectacular incident of evil will be balanced by ten thousand acts of kindness, too often unnoted and invisible as the "ordinary" efforts of a vast majority.

In 2002, cancer returned, and this time stared him down. Stephen Jay Gould died on May 20, 2002, a profound loss to Harvard and the world at large. He is survived by Jesse and Ethan Gould, children by his first marriage to the former Deborah Lee, and by his second wife, Rhonda Roland Shearer.

Respectfully submitted,

Richard Bambach

Raymond Siever †

Andrew H. Knoll, Chair