mote the elimination of the practice. The SPCSCPG lasted until 1941 and at its peak counted more than 31,000 members, including George Herman "Babe" Ruth and King George V. Although the SPCSCPG ostensibly was formed to eliminate a racist practice stemming from the slavery era, some scholars speculate that the society was formed as a way for white railway workers and frequent Pullman passengers to distance themselves from the African American Pullman porters.

In 1925 the Pullman porters formed the BSCP and chose A. Philip Randolph (1889–1979), the well-educated editor of Harlem's *Messenger Magazine*, as president. Randolph had never been employed as a porter and therefore could not be disciplined by the Pullman Company. Hence Randolph maintained complete control of the direction of BSCP throughout his long tenure as the organization's president and relied on his regional delegates, most notably Milton P. Webster of the Chicago chapter, to maintain the day-to-day activities of the union.

The most important issues for Randolph and the BSCP in the early years were to win recognition of the BSCP as the sole authorized representatives of the Pullman porters and then to deal with the industry's split labor market that placed African Americans in lower-paying positions or paid them less even when they were doing the same work as whites, such as conductor duties. After a long and contentious fight, the first goal was accomplished, and progress was made toward achieving the second goal.

The Pullman Company and other employers of the period were not alone in their determination to protect the split labor market. Labor unions were unwilling to embrace African Americans, typically seeing them as competitors rather than allies. However, by 1929 the BSCP was admitted into the American Federation of Labor (AFL). Randolph used his position in the AFL to push for greater acceptance of minority workers by stressing the common economic goals of workers rather than racial differences, and he was instrumental in gaining wider acceptance of African Americans in many industries.

In 1941 Randolph and other BSCP organizers called for African Americans to march on Washington, D.C., to protest racial discrimination in the defense industries. Randolph decided that the march had to be an African Americans–only protest, not to distance African Americans from supportive whites but to establish African American control over their own destinies. Once it became obvious to President Franklin D. Roosevelt that Randolph had succeeded in effectively organizing a massive protest, he signed Executive Order 8802, the Fair Employment Act (1941), which prohibited defense and other government-related industries from discriminating against African Americans. Although this order carried no punitive measures for those who did not comply, it officially acknowledged the need for the government to address racial issues. Randolph called off the march on Washington, but the group continued to work on civil rights issues.

In 1982 Jack Santino produced and directed *Miles of Smiles, Years of Struggle: The Untold Story of the Black Pullman Porter,* a documentary chronicling the organization of the BSCP and the impact this group had on the U.S. civil rights movement. In 1983 Santino followed up with a striking article in the *Journal of American Folklore* that documented through oral history the racial stereotypes, racial violence, and other forms of racial discrimination faced by African American porters, who were by then in their eighties and nineties. Interestingly many of the instances of racism and abuse discussed by the former porters occurred long after the formation of the BSCP.

SEE ALSO *Civil Rights Movement, U.S.; Discrimination, Racial; Labor; Racism; Roosevelt, Franklin D.; Social Movements; Unions*

BIBLIOGRAPHY

Bates, Beth Thompkins. 2001. *Pullman Porters and the Rise of Protest Politics in Black America, 1925–1945.* Chapel Hill: University of North Carolina Press.

Calliste, Agnes. 1995. The Struggles for Employment Equity by Blacks on American and Canadian Railroads. *Journal of Black Studies* 25: 297–317.

Harris, William H. 1979. A. Philip Randolph as a Charismatic Leader, 1925–1941. *Journal of Negro History* 64: 301–315.

Santino, Jack. 1982. *Miles of Smiles, Years of Struggle: The Untold Story of the Black Pullman Porter.* San Francisco: California Newsreel.

Santino, Jack. 1983. Miles of Smiles, Years of Struggle: The Negotiation of Black Occupational Identity through Personal Experience Narrative. *Journal of American Folklore* 96 (382): 393–412.

Valien, Preston. 1940. The Brotherhood of Sleeping Car Porters. *Phylon* 1: 224–238.

Paul Ketchum
David G. Embrick

PUNCTUATED EQUILIBRIUM

Punctuated equilibrium is a descriptive hypothesis in evolutionary biology concerned with macroevolutionary dynamics specifically at the level of speciation. Punctuated equilibrium holds that most species originate by the splitting of a population during brief geological periods (punctuations), and that subsequently species persist with only

relatively moderate morphological change (stasis) for the remainder of their existences. "Evolution by jerks," as punctuated equilibrium has been lucidly labeled, is usually contrasted with *phyletic gradualism* ("evolution by creeps"), which states that species evolve uniformly and slowly by the gradual transformation of large populations. Proposed jointly by paleontologists Niles Eldredge and Stephen Jay Gould (1941–2002) in 1972, punctuated equilibrium immediately lit a scientific controversy that has smoldered ever since.

Punctuated equilibrium was, however, hardly controversial at its inception. As a general characterization of macroevolutionary processes, it was largely presaged by Hugh Falconer (1808–1865) and Charles Darwin (1809–1882) in the mid-nineteenth century and later echoed by Hermann J. Muller (1890–1967) and George Gaylord Simpson (1902–1984) in the early twentieth century. Eldredge and Gould postulated their version of the hypothesis as a logical extension (into paleontology) of Ernst Mayr's (1904–2005) ecological theory of *allopatric speciation* (1963), which was widely considered the dominant theory of speciation. Allopatric theory proposes that speciation occurs when a smaller subpopulation becomes geographically isolated from its parent population. Over time, this peripheral daughter population diverges in isolation until it can no longer interbreed with the parent. Speciation as such happens relatively quickly in a small population and in a limited geographic range. Due to the relative brevity of this localized speciation event, intermediate morphologies will be unlikely to fossilize and will be rare even if they do, producing an apparent paleontological pattern of stasis punctuated by discontinuous speciation events.

While born of an orthodox evolutionary theory, punctuated equilibrium has been associated throughout its existence with more radical evolutionary concepts. The scientific controversy over punctuated equilibrium is multifaceted, but it has largely coalesced around three related issues: (1) whether punctuated equilibrium is "Darwinian"; (2) whether stasis truly is the predominant mode of evolution in the fossil record; and (3) whether the proposed mechanisms for both stasis and punctuations are valid.

One of the easiest means to draw attention to an evolutionary concept is to pronounce it "anti-Darwinian," and punctuated equilibrium has been no exception. Both proponents and detractors of punctuated equilibrium often claim that Darwin explained the incompleteness of the paleontological record as solely the result of the imperfect geological preservation of fossils. However, as pointed out by Frank H. T. Rhodes (1983, 1987), Darwin in fact devoted the larger part of chapter 10 of *On the Origin of Species* (titled "On the Imperfection of the Geological Record") to explaining how "gaps" in the fossil record are a direct consequence of speciation processes and the nature of natural selection. Like Eldredge and Gould, Darwin thought it likely that most species exist in a state of morphological stasis, only intermittently broken by bursts of localized change and speciation. Darwin found this point so important for understanding the paleontological record that he reiterated the argument in three separate chapters (Darwin [1872] 1993, chap. 4, "Natural Selection," p. 152; chap. 10, p. 428; and chap. 15, "Recapitulation and Conclusion," p. 619).

Furthermore, in debates over punctuated equilibrium, the term *gradualism* has been used in at least two different senses. Eldredge and Gould's phyletic gradualism concerns the tempo of evolution, entailing evolutionary trajectories that are geologically slow, constant, and unidirectional—a concept pointedly contrasted with the rapid speciation described by punctuated equilibrium. For Darwin, however, *gradual* has little to do with rate ([1872] 1993, pp. 312–317). Rather, it means that evolution by natural selection advances in small "grades" that are dependent on a population's normal genetic variation. Morphological change therefore can be genetically gradual and geologically rapid. While phyletic gradualism may have been a widespread evolutionary assumption in the twentieth century, it cannot be pinned on Darwin himself. Thus, given the significant overlap between the tenets of punctuationism and Darwin's views, punctuated equilibrium is resolutely "Darwinian."

Whether the fossil record truly displays a predominant pattern of stasis continues to be an active area of paleontological research. Punctuated equilibrium is most readily tested when geological strata are well resolved temporally with abundant fossil preservation. Empirical studies have resulted in mixed appraisals, with a roughly equal spread among those supporting phyletic gradualism, punctuated equilibrium, or a third "hybrid" process that may be described as *punctuated gradualism* (Erwin and Anstey 1995). Probably the most tangible contribution of the punctuated equilibrium controversy has been the widespread acceptance of Gould and Eldredge's claim that "stasis is data." Lack of morphological change is an evolutionary pattern that warrants an explanation.

The assortment of mechanisms that Gould and Eldredge have proposed to explain stasis and rapid speciation is the most contentious aspect of the punctuated equilibrium debate (Coyne and Charlesworth 1997). Eldredge and Gould initially implied that punctuated equilibrium is explained adequately by Mayr's mainstream theory of allopatric speciation. However, they successively suggested numerous additional "non-Darwinian" mechanisms, including saltational mutations and species selection (Gould 1980, 2002), none of which have been broadly accepted. Emphasizing an antireductionist plural-

ism, Eldredge and Gould further claimed that each of these speculative mechanisms was significant for its potential to decouple lower-level genetic processes from upper-level macroevolutionary trends. Perhaps ironically, the punctuationist paradigm has been adopted more recently by molecular biologists, who have found within in vitro evolution experiments analogous patterns of stasis interleaved with rapid genetic change (Elena et al. 1996). Thus, punctuated equilibrium may ultimately find its *raison d'être* in the very reductionist realm so vigorously opposed by Gould: molecular evolution via the "selfish gene."

SEE ALSO *Anthropology, Biological; Archaeology; Darwin, Charles; Gould, Stephen Jay*

BIBLIOGRAPHY

Coyne, Jerry A., and Brian Charlesworth. 1997. On Punctuated Equilibria. *Science* 276 (5311): 338–341.

Darwin, Charles. [1872] 1993. *The Origin of Species by Means of Natural Selection.* 6th ed. New York: Modern Library.

Eldredge, Niles, and Stephen Jay Gould. 1972. Punctuated Equilibria: An Alternative to Phyletic Gradualism. In *Models in Paleobiology*, ed. Thomas J. M. Schopf, 82–115. San Francisco: Freeman, Cooper.

Elena, Santiago F., Vaughn S. Cooper, and Richard E. Lenski. 1996. Punctuated Evolution Caused by Selection of Rare Beneficial Mutations. *Science* 272 (5269): 1802–1804.

Erwin, Douglas H., and Robert L. Anstey. 1995. Introduction. In *New Approaches to Speciation in the Fossil Record*, 11–38. New York: Columbia University Press.

Gould, Stephen Jay. 1980. Is a New and General Theory of Evolution Emerging? *Paleobiology* 6 (1): 119–130.

Gould, Stephen Jay. 2002. *The Structure of Evolutionary Theory.* Cambridge, MA: Belknap.

Gould, Stephen Jay, and Niles Eldredge. 1977. Punctuated Equilibria: The Tempo and Mode of Evolution Reconsidered. *Paleobiology* 3: 115–151.

Mayr, Ernst. 1963. *Animal Species and Evolution.* Cambridge, MA: Harvard University Press.

Rhodes, Frank H. T. 1983. Gradualism, Punctuated Equilibria, and the Origin of Species. *Nature* 305 (5932): 269–272.

Rhodes, Frank H. T. 1987. Darwinian Gradualism and Its Limits: The Development of Darwin's Views on the Rate and Pattern of Evolutionary Change. *Journal of the History of Biology* 20 (2): 139–157.

Douglas L. Theobald

PUNISHMENT

The concept of punishment originates at least as far back in philosophy as Socrates (Cooper and Hutchinson 1997), and the practice of punishment as a social institution seems to go as far back as there have been human societies. While the histories of the institutions of punishment vary from society to society, country to country, and nation to nation, some questions about punishment seem to be nearly universal. Because of the importance of the institution of punishment, it is crucial that its conceptual underpinning be explored with precision and care. What is punishment? Is it ever morally justified? Can it play a role in maintaining and strengthening just political institutions?

There are at least three important philosophical and ethical questions concerning punishment. The first concerns its nature. Much confusion can result if the nature of punishment is not understood to amount to some kind of harsh treatment of the offender or the harmful wrongdoer. Although punishment is legitimate, institutionally implemented harsh treatment for the commission of a legal offense (Hart 1968; Feinberg 1970; Rawls 2000; Corlett 2006), it might well have side effects—even positive ones—such as moral education or rehabilitation. By "harsh treatment" is meant some form of corporal punishment, incarceration, fines, or the like. But it is important not to confuse punishment with deterrence, moral education, or rehabilitation. These are not forms of punishment, because punishment is not properly defined necessarily in terms of deterring, morally educating, or rehabilitating offenders. To think otherwise is to beg the question in favor of one of the theories of punishment considered below. This is not to say, however, that genuine punishment cannot deter future harmful wrongdoings, morally educate, or rehabilitate in some ways on some occasions.

A second question concerning punishment amounts to a set of questions raised by Anthony Quinton (1954), John Rawls (1955), and Stanley Benn (1958). The first pertains to the moral justification of the institution of punishment itself, while the second regards the moral justification of particular forms of punishment. Clearly, the belief that punishment is morally justified does not mean that all forms of punishment are justified, though it would seem that for any particular form of punishment to be justified, the institution of punishment itself must be justified. Attempts have been made to reconcile major theories of punishment by suggesting that one theory is best fit to answer the question of the morality of the institution of punishment, while another theory is best able to answer questions of how particular punishments ought to be meted out to offenders (Rawls 1955; Corlett 2006).

A third question regarding punishment is the extent to which it might serve to the betterment of just political institutions. The role that punishment might play in maintaining and strengthening just political institutions has been addressed in a myriad of ways in recent years,