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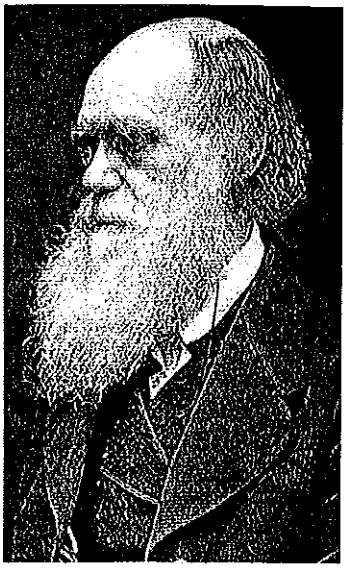
Charles Darwin the economist by Robert H. Frank

Natural selection explains more about economics than Adam Smith's invisible hand.



With good reason, most contemporary economists regard Adam Smith as the founder of their discipline. But I would instead accord that honor to Charles Darwin, the pioneering naturalist. Although Darwin had no formal training in economics, he studied the works of early economists carefully, and the plants and animals that were his focus were embroiled in competitive struggles much like the ones we see in the marketplace. His observations forged an understanding of competition that is subtly but profoundly different from Smith's. The celebrated invisible hand theory that Smith developed holds that unfettered markets will ultimately channel self-interest to serve the common good. But this idea is really just an interesting special case of Darwin's more general theory.

Smith did not claim that markets always channel greed in socially productive ways. For him, the remarkable thing was that they often appeared to. Although his account of how that happens lacks the generality that many of his most enthusiastic modern disciples ascribe to it, it will endure as one of mankind's most impressive intellectual achievements. Consider his description of product design improvements or cost-reducing innovations. The entrepreneurs who introduce them hope to steal sales from rivals. They often succeed spectacularly in the short term, which pressures rivals to mimic the innovations. The ultimate beneficiaries of this competition, Smith explained, are not businesses but consumers, who enjoy ever better products at ever lower prices.

In Darwin's theory, natural selection favors traits and behaviors that promote individual reproductive success. Many of the examples he observed were closely analogous to Smith's account of product design improvements. But Darwin also recognized that individual and group interests often conflict sharply and that, in those cases, individual interests generally trump group interests.

The evolution of keen eyesight among hawks is an example of the former type. A mutation that led to slightly improved vision benefited the individual in which it first occurred. By enabling that individual to catch more prey and feed more offspring, it spread quickly. Similar mutations accreted, with the result that virtually all modern hawks have astonishingly acute vision by

human standards. Like Smith's product design improvements, these mutations no longer confer relative advantage to individual hawks, but their ultimate effect was to make hawks more effective as a species.

In many other cases, however, mutations that promote individual reproductive success prove costly to the larger group. A vivid case in point is the prodigious antlers of the bull elk. Like males of most other vertebrate species, these animals take more than one mate if they can. But if some succeed, others are left with none, making them the ultimate losers in Darwinian terms. It was thus inevitable that bulls would fight bitterly for access to females, and also inevitable that natural selection would spawn an arms race in the antlers that promoted success in those battles. But while the massive antlers of surviving bulls, which often span more than 4 feet and weigh more than 40 pounds, help them prevail in battles for mates, they are a serious handicap when bulls are chased into densely wooded areas by predators. Because it is relative antler size that matters in battle, bulls would have good reasons to favor a proposal to trim each animal's antlers by half. The outcome of every fight would be the same as before, and each bull would be far better able to escape from wolves. Yet bulls are stuck with their handicap because any individual bull with smaller antlers would never win a mate.

In short, Darwin's understanding of competition makes clear that there can be no presumption that the process promotes the common good. Often it does. But success in Darwinian terms typically depends heavily on relative performance, and attempts to occupy scarce slots atop any hierarchy inevitably provoke wasteful, mutually offsetting arms races. It's an important point, since the modern conservative's case for minimal government rests on the presumption that competition always promotes society's welfare. But our best understanding of how competition actually functions, as Darwin's work makes clear, supports no such presumption.

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1. According to the author, how are Smith's and Darwin's theories similar?

2. What limits may exist to the connections the author proposes?