

Viewpoint: Evolution is more than a Darwinian ‘selfish gene’ battle to the death

The idea that selfishness and greed are drivers of evolution, and therefore possess underlying virtue, has been around for over a century, ever since Charles Darwin’s [theory of evolution](#) became widely accepted. The archetypal robber barons, [Andrew Carnegie and John D. Rockefeller](#), both argued that the “survival of the fittest” principle justified their cutthroat tactics.

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In recent decades, researchers in evolutionary biology have overturned virtually every significant assumption in the selfish gene account. In its place, they have developed a far more sophisticated conception of how evolution works, revealing the rich tapestry of nature’s dynamic interconnectedness. Rather than evolution being driven by competition, it turns out that cooperation has played a far more important role.

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In the [early years of life on Earth](#), it’s likely that gene sharing (known officially as horizontal gene transfer) was the predominant way evolution worked. In fact, researchers now believe that the eukaryote genome was itself the result of a fusion of two prokaryotic genomes.

Instead of a Darwinian “tree of life,” biologists are offering alternative metaphors such as a “bush” or “net” of life to better describe how we are all intricately connected. In the memorable words of [biologist] Lynn Margulis: “Life did not take over the world by combat but by networking.”

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