NEXTQUESTION

Why Does Darwin Still Matter?

On February 12, 1809, little Charles was born. Two hundred years later-and 150 years after the publication of his landmark treatise On the Origin of Speciesnine scientists, thinkers, and leaders talk about how the evolutionary theorist changed our lives and their work.

> Darwin's contribution to science, then and now, has been enormous. If Darwin returned today and learned about the DNA similarities between humans and chimpanzees, the uncanny similarities in our social behavior, and if he were able to study the array of fossil hominids discovered since he came out with his theory of evolution, I believe he would be smiling to see how right he was in his thinking.

Primatologist, anthropologist, UN Messenger of Peace, and founder of the Jane Goodall Institute

Darwin democratized understanding. When somehave this power over you, explaining something to you that you have to accept on faith. Darwin said, "No, this is something we can understand." Where we explanation rather than mysticism.

Lead singer of Third Eye Blind and writer of the 1999 song "Darwin." The band's new album, Ursa Major,

Many people 150 years ago saw no real conflict between Darwin and God. Darwin's theory was actually embraced by many in the church as an answer to the question, "How did God accomplish the creation?" Darwin's theory meant to be about the connectedness of all living things-in fact, today, nothing in biology or medicine can really be interpreted without it. But evolution has been turned into a theological and philosophical argument, and that, I think, was much more than Darwin intended.

FRANCIS COLLINS

Former director of the Human Genome Project and author of The Language of God: A Scientist Presents Evidence for Belief





The basic premise of Heroes was built on the theory of natural selection. I started with the idea that our world is in crisis and that evolution was adjusting for this by populating our species with a small group of individuals who have developed extraordinary traits that will take them to the next evolutionary rung and enable them to help "save the world."

> Creator and executive producer of the NBC series Heroes

The most inspiring aspect of evolutionary theory is its utter simplicity, yet the results-the diversity, creativity, and scope—are
astounding. Spore overtly tries to bring the
player through the journey of evolution:
Life starts out simple, but gradually gets more
complex. You see the same principle on the Net. Players are generating huge amounts of content. Whether it's a YouTube video or a story that somebody's told in The Sims, there's Darwinbe a universal process.

> Creator of the video games The Sims and Spore

> > Darwin was such a great observer of life. He saw clarity. We put a lot of what we think is intelligence into picking a mate, but much of it is based in our genome. That's why we have kids: We want to propagate our species. It's built into us. But it's also interesting to look at how much we've moved beyond evolution. We have the ability to survive things we couldn't before. Technology is supplanting things that would have been a concern.

LINDA AVEY

Cofounder of the personal genomics company 23andMe

I believe Darwin's own words provide the best answer: "It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change." To the extent that we, as scientists and educators, quickly and creatively adapt to our world's accelerating changes, we confirm Darwin's assertion.

> MARYE ANNE FOX Chemist and chancellor of UC San Diego







Evolutionary theory helps us see the big landscape. It makes clear what the possibilities for change are. I study aging. People often think lifespan is what it is: death and taxes, fixed in stone. But when we changed a gene in the roundworm, we doubled its lifespan. What if we altered that gene in all sorts of animals, in humans? Evolution isn't over—and it might just need a nudge from people.

Cofounder of Elixir Pharmaceuticals and professor of biochemistry at UC San Francisco

> Darwin has stood the enormous test of time in terms of lasting impact, not just on biology but on economics, psychology, and certainly business. His arguments are significant for coping with crises and in thinking about innovation and competition-about how industries change over time and what's needed to deal with that kind of change.

ANDREW LO

Chief scientific officer of the Alpha-Simplex Group hedge fund and professor at the MIT Sloan School of Management

INTERVIEWS BY JEFF CHU, ANNE C. LEE, SEAN LUDWIG, AND KATE ROCKWOOD

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