EVOLUTION LEADS TO DINOSAUR ARTIST'S DISCOVERY:

The importance of young artists to society is underappreciated. Their lives provide a model where hope transcends reality, a necessary counterweight for lives where hope is subsumed by financial imperative.

Young artists also provide the cultural novelty that allows art to evolve. As with organic evolution, most novelties don't get a chance to propagate into the future. But a fine example of a novelty that did is being celebrated this year at the Peabody Museum of Natural History at Yale.

There, 60 years ago, an "undiscovered" artist named Rudolph Zallinger painted an enormous mural called "The Age of the Reptiles." This colorful fresco adorns the east wall of an exhibit gallery containing the mounted skeletons of colossal dinosaurs and other vertebrate fossils. Ever since then the mural has influenced our perceptions about the savage beauty of ancient life.

During organic evolution, hope for the future lies within random genetic mutations taking place within individuals. Most mutations fall by the wayside because they provide no advantage in a world controlled from the top down. Those that do provide an advantage, however, are more likely to be retained for the future. For example, a mutation for a large Apatosaurus (Brontosaurus), rather than a small one, might be more readily retained in a world where Allosaurus was king of the beasts. There is, however, considerable randomness involved.

Rudolph Zallinger provides a good example of an archetypical, underemployed artist getting a lucky break. In 1942 he was about to graduate from the Yale School of Fine Arts. To get by, he found short-term employment drawing technical illustrations of seaweed. But as luck would have it, a powerful force appeared in the form of the museum's director, Albert Parr, who just happened to meet the seaweed sketcher. In very short order, Parr asked Zallinger to do the mural. Bingo.

The artistic novelty within the mind of young Zallinger was randomly selected by his environment. For the next six months, he took a crash course in paleontology while gathering the guts to paint one of the largest indoor murals ever conceived. Then, with consummate skill, he spent more than four years painting a mural as important as any Renaissance masterwork. To my mind, the dinosaur gallery at the Peabody has become a Sistine Chapel to science, famed as much for the painting as for its old bones.

Zallinger's success demonstrates that young artists require three things: talent, commitment and a lucky break. I feel sorry for those who struggle for years with the delusion they are talented, perhaps because they were raised by those believing that self-esteem should trump honest appraisal. (I suffered such a delusion when I was in college, believing that I would be a professional saxophone player). I feel slightly more sorry for young artists with genuine talent, but who are unwilling or unable to commit themselves to a career where the probability of commercial failure is high. But the artists I feel most sorry for are those with both talent and courage, yet who never got the lucky break they deserved. They are equivalent to organisms with mutations that were favorable to their environments, but which were, by chance, not selected.

Based on our knowledge of dinosaurs today, the mural is scientifically flawed. Tyrannosaurus drags its tail, which it clearly did not do. Apatosaurus supports its great bulk in the water, rather than on dry land, and with the head from the wrong animal. Hence, the "Age of the Reptiles" has become a cultural fossil, showing us what our knowledge was like at some earlier time.
Organic evolution isn’t a process. It’s a form of history. It’s an outcome driven by natural selection, in which environmental forces reach down from the top to make statistical choices about genetic novelty produced from the bottom. Art history is also an outcome driven by the top-down selection of bottom-up ideas. As with all types of history, everything in the diversity of life and art evolves through random contingency.

Had the museum's director not spotted the young artist on the moment of his graduation, and had that artist not possessed pluck and talent, I might not have become obsessed with dinosaurs as a kid and hence, a geologist as an adult.

Happy 60th anniversary to the Pulitzer Award-winning Zallinger mural.