

Religion, evolution not mutually exclusive

Goldwin Emerson, gandjemerson@rogers.com

London Free Press, April 6, 2019

It is unfortunate when people who hold a strong belief in religion also believe the theory of evolution necessarily runs counter to their religious beliefs. Often this conflict arises from an inaccurate knowledge of evolution. Charles Darwin and Alfred Wallace were two independent founders of the theory of evolution who published their parallel ideas about one 160 years ago.

An erroneous understanding of evolution occurs when people believe that evolution means changes occur randomly or by chance. Thus, they believe that the development of humans from earlier primates, or the marvelous development of eyesight, for example, seem too miraculous to have simply occurred randomly. From their perspective, it seems logical to conclude there must surely be a supreme being to produce the development of humans. In one sense they are correct. Such marvelous developments would not occur by mere chance, even in a universe that is so large that we cannot comprehend its immensity nor its approximate time span of 13.7 billion years.

But the theory of evolution does *not* indicate that things happened by luck nor by chance. Darwin and Wallace proposed a directing principle called *natural selection*. Geneticists know that our bodies continually replicate new cells to replace aging ones. This system of replication is not perfect. Variations in the replication of cells are called *mutations*. Some mutations are functional, but most are dysfunctional. An extreme case of dysfunctional mutations occurs when we develop cancer or other defects in cell replication. In the long run, different species, including humans, benefit through functional mutations that are the most helpful in improving our capacity to survive. Darwin and Wallace called this process *natural selection*.

Natural selection provides *direction* towards helping the most fit and the most able to survive and reproduce by mutational changes that offer a *survival benefit*. In this important sense, there is a directing force in the changes which occur over long periods of time among all living plants and species. For example, animals such as zebras develop better muscles, keener eyesight and more acute hearing. This allows them to escape from their predators, the lions. The zebras that evolve the quickest are the most likely to survive, to breed, and to pass on their evolutionary survival benefits to their off-spring.

Interestingly, the lions also evolve to have better muscles and faster and keener hunting skills. The lions that don't evolve will be hungry and unsuccessful and will not live to reproduce. So evolution is not random chance. It is *directed* towards survival improvement in living species and plants.

Natural selection is sometimes incorrectly equated to “survival of the fittest” where fittest is mistakenly understood to be “the strongest.” Yet, dinosaurs and ancient woolly mammoths have not been able to survive as long as much weaker insects like ants. Ants have been able to evolve. That is, ants which reproduce rapidly have been able to fit in to changing environments which enable them to use beneficial mutations.

Many religious believers observe the beauty of the sunset; they breathe oxygen needed to survive, and they think “What a wonderful environment we have. If it were not made just the way it is, we could not live. It must have been designed just this way so humans can exist.” For them, it is a kind of “proof” of a supreme being. But for Darwin, who recognized there are many changing environments, even within our own planetary system, the view is different. The world was not “made” for humans. When it was formed billions of years ago, humans did not exist. Much later, over 3.9 billion years ago, humans evolved from primitive life forms, enabling them to survive on planet earth. Like religion, this natural version of evolution can still fill our minds with feelings of awe, wonder and gratitude. But we may destroy our ability to survive if, by human action, we pollute our air and water, cause climate changes, or use up our natural resources and thus change our planet to more hostile environments.

It is regrettable when some sincere religious believers think that religion means they must give up belief in evolution, particularly if their understanding of evolution is based on incorrect knowledge of the science that supports it. Evolution is not based on pure random chance. It should not be rejected on that erroneous basis. Religion and evolution need not be in conflict on this point. Fortunately, there are many religious believers who also accept a scientific view of evolution.